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LETTERS

AND

ESSAYS, &c.

By DIFFERENT PRACTITIONERS.

LETTERS

AND

ESSAYS

ON

THE SMALL-POX
AND INOCULATION,
THE MEASLES,
THE DRY BELLY-ACHE,
THE YELLOW, AND
REMITTING, AND
INTERMITTING
FEVERS

OF THE

WEST INDIES.

TO WHICH ARE ADDED,

THOUGHTS

ON THE

HYDROCEPHALUS INTERNUS,

AND

OBSERVATIONS

ON

HYDATIDES IN THE HEADS OF CATTLE.

BY

DIFFERENT PRACTITIONERS.

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THE

PREFACE.

THE following Letters, giving an account of the *Small-Pox*, *Meaſles*, and *Bilious Cholic* in Jamaica, were written at different times to Dr. D. Monro, in Jermyn-ſtreet, phyſician to St. George's hoſpital; who had requeſted the author, when he went to the Weſt Indies, to communicate what obſervations he made on the diſeaſes incident to warm climates.

In compliance with that requeſt, the author noted down ſuch obſervations as he made on the diſeaſes

which occurred, and tranſmitted them in the form they now appear, with an intention of their being publiſhed, if they ſhould be thought deſerving.

THE firſt letter was read by Dr. Monro, at a meeting of the College of Phyſicians, London, in December 1771, and afterwards inſerted in their ſecond volume of Medical Tranſactions.

THE others, as well as the papers on the Hydrocephalus Internus, and on Hydatides in the heads of cattle, were intended to have been preſented to the public through the ſame channel; but the College of Phyſicians, ſoon after the publication of their ſecond volume, came to a reſolution not to publiſh any more medical obſervations; and therefore, at the deſire of the authors, they were given to the bookſeller, for publication; and along with them Dr.

D. Monro

D. Monro gave ſome letters on the ſubjects treated of, which he had accidently preſerved.

To theſe has ſince been added, a little eſſay on the *Yellow* and *Remitting* and *Intermitting Fevers* of the Weſt Indies, written by the late ingenious and very worthy John Hume, M. D. commiſſioner for the ſick and hurt of the royal navy, which has been preſerved by a permiſſion which he had given to a friend, ſome years before his death, to take a copy of it, the original having been deſtroyed along with ſome other papers; and it is now publiſhed by the conſent of his relations.

As the obſervations on the diſeaſes of warm climates, treated of in this volume, were moſtly made in Jamaica, it may not be amiſs to give a ſhort deſcription of the ſituation and climate of this iſland, along with Mr. Quier's account of that part of it in

which

which he reſides, and then to ſub-join a few words concerning thoſe means which are moſt likely to conduce to the preſervation of the health of Europeans in warm climates.

The iſland of Jamaica lies between 17° 50″ and 18° 50″ north latitude within the tropics. Its eaſtermoſt point at Port Morant is ſituated in 18° north latitude, and near 76° weſt longitude from London: the iſland extends from thence two and a half degrees to the weſtward: it is of an oval figure, computed to be about one hundred, and ſeventy four Engliſh miles long, and ſeventy broad. In the middle is a chain of lofty mountains, which runs from eaſt to weſt, the whole length of the iſland; and there are many hills and riſing grounds ventilated with a free and ſalubrious air in every pariſh.

From theſe mountains and hills, riſe numerous pleaſant and uſeful ri-

vers;

vers: the water in moſt of them is good; though in ſome of the rivers, in the low lands, it is brackiſh. The country every where abounds with ſprings of fine water, and there are warm baths, and ſprings of cold mineral waters in different parts of the iſland. The warm baths, near the town of Bath, in the pariſh of St. Thomas, which forms the ſouth-eaſt corner of the iſland, are thoſe in moſt repute, and moſt reſorted to for the cure of diſeaſes: their water is hot, and ſmells and taſtes of ſulphur; and ſome miles weſtward of theſe baths, near Blue-mountain Valley, is a cold ſulphureous ſpring, which depoſits an inflammable ſediment. At Ricket's Savannah, in Weſtmoreland pariſh, is a briſk, ſpirity, chalybeate water; and there has lately been diſcovered a hot ſpring in the mountains lying between this and the pariſh of Hanover.

THERE have been volcanos, or mountains, which vomited fire in this country, and it is ſubject to frequent ſhocks of an earthquake, and to thunder: on the 7th of June, 1692, there was ſuch a dreadful earthquake as threatened deſtruction to the whole iſland.

THE mountains are, in general, covered with wood, and the places on them, and the valleys between them, which are cleared, afford the fineſt paſturage for cattle, and moſt of the fruits and other vegetables of the temperate European climates: the low grounds are planted with ſugar-canes, and other products of the hot countries.

THE iſland is plentifully ſtored with black cattle, ſheep, ſwine, poultry, &c. and the rivers and ſea ſupply plenty of fine fiſh and turtle: it abounds with vegetables of all kinds, and particularly with variety of the fineſt mild ſubacid and acid fruits,

fruits, ſuch as pine-apples, oranges, alligator-pears, grapes, cocoa-nuts, chaddocks, lemons, limes, &c. and with various ſpecies of pepper, and other aromatics.

It is at preſent reckoned one of the moſt healthy iſlands in the Weſt Indies, and is much more ſo now, particularly near the towns, than it was formerly; owing to the ground being more cleared, and to the inhabitants becoming more temperate, and having learnt from experience to accommodate better their manner of living to the climate they reſide in.

The moſt wholeſome ſituations are thoſe on the ſides of hills or mountains, where the ſoil is dry, and clear from woods and ſtagnating water; and where there are no moraſſes within three miles. Hence many of the lands, of the middle diſtricts, are reckoned as healthful as any part of Great Britain. In the low part of

the country, thoſe places whoſe ſituation is dry, at a diſtance from marſhes, and ventilated by a free air, are moſt healthful.

THE unhealthy places are few, in proportion to the extent of the iſland; they are thoſe which are low and ſwampy; which are wet, and not cleared of wood; which are ſometimes covered with water, that dries up in the hot ſeaſon; which are frequently overflowed by the ſea, or where the ſhore is lined with ſtinking ooze or mud; and likewiſe ſuch as, by their ſituation, ſhould ſeem to be healthy, but are within a mile or two of unwholeſome marſhes or ſwamps, and are expoſed to the winds coming from them.

IN this iſland, they have regular ſea and land-breezes alternately ſucceeding each other: the ſea-breeze begins ſooner or later in the morning, and is ſucceeded ſooner or later

in

in the evening by the land-breeze; the winds from the north are often cold, and ſometimes very ſtrong, and come near to the hurricanes of the Windward Iſlands: they are often partial, but ſometimes pretty general through the iſland in the winter months.

THE heat of Jamaica varies in different parts of the iſland, and at different ſeaſons of the year. It is greateſt in the low, ſandy grounds on the ſouth ſide of the iſland, and is leaſt in the mountains.

THE heat at Kingſton is ſomewhat greater than at Spaniſh Town; and, about ten miles weſt of this place, in a ſmall vale, environed by hills, it was found, at an average, to be ſix or ſeven degrees cooler than in town.

THE hotteſt time of the year is juſt before the ſetting in of the autumnal rains in Auguſt and September.

THE medium heat of Spaniſh Town in the cooler part of the year, is about 78; and, in the hotter months, about 85 of Fahrenheit's thermometer; and the higheſt in the whole year has rarely exceeded 92.

THE following is a table of the degrees at which the quickſilver in Fahrenheit's thermometer ſtood at, for one year at Spaniſh Town, which was publiſhed in chap. vii. of the third volume of the Hiſtory of Jamaica, printed by Mr. Lowndes, Fleet-ſtreet, London, 1774.

TABLE of the DEGREES of HEAT at SPANISH TOWN.

	high.	low.		high.	low.
In January	83	76	July	80	80
February	85	66	Auguſt	92	81
March	84	71	September	89	77
April	86	67	October	87	73
May	87	77	November	79	71
June	88	84	December	79	70

THE

THE quickſilver in the barometer commonly ſtands at

	Inches.	10ths.
	29	—9
Its greateſt riſe is to	31	—7
And loweſt fall to	28	—2

THE heat of the ſun, and conſequent evaporation, being ſo much greater in the warm than in the cold climates, requires a greater quantity of rain to keep the ground moiſt and proper for vegetation: hence, in Jamaica, we find, that there falls near three times the quantity of rain that there does in Great Britain; for, taking the whole iſland throughout, there falls, in ſeaſonable years, from 65 to 70 inches.

IN Auguſt, September, and October, there commonly falls more rain than at any other time of the year; and hence this is called the Rainy Seaſon.

THE rain falls with a violence rarely ſeen in England, eſpecially in thunder-ſhowers: commonly there falls frequent ſhowers at all ſeaſons, but ſometimes there is ſo little rain in the low lands, that the ſugar-canes are in danger of being deſtroyed for want of it. In the woody parts of the iſland there is almoſt a conſtant drizzle. With reſpect to the ſeaſons for rain, they ſhould ſeem to be different in the ſouth and north ſides of the iſland; for Dr. Trapham, in his Diſcourſe of the State of Health in Jamaica, publiſhed in 1679, after obſerving that the north ſide of the iſland is cooler than the ſouth, adds, "Neither herein only are the north and ſouth ſides differenced, but more eminently in their various ſeaſons; for whereas the ſouth ſide, ſummer, or moſt direct neighbourhood of the ſun, brings in the rains; and when the ſun is more

remote

remote in its Capricorn progreſs, our dry times are generally obſerved; it is quite contrary in the north ſide; for there the more eminent ſeaſons of rain make the winter in its proper time, and leave the ſummer, like that of the Engliſh, to be more dry."

On the ſouth ſide of the iſland, November, December, January, and February are the coldeſt months in the year, and moſt free from rain.—November is commonly the cooleſt.—March, April, May, and June, are very hot.—In July, Auguſt, September, and October, there is always much rain and heat.

In general, all over the Weſt Indies, the weather begins to cool, and the northerly winds to blow in November, and the weather continues pretty wholeſome till May or June, when it commonly begins to rain: ſometimes, though rarely, it rains in April.

The

THE following ſhort account of Jamaica, and particularly of that part of the iſland in which Mr. Quier, the author of ſeveral of theſe letters, lives, was tranſmitted by him in a letter to Dr. Monro, in the year 1768.

" Sir,

THE ideas people in Great Britain entertain of Jamaica having chiefly taken their riſe from the information of thoſe who have only viſited the low lands, on the ſea-coaſt, are in general very ill founded. The internal part of the iſland is very high, broken land, and, in ſome places, the mountains riſe to a prodigious height: between the hills are interſperſed large, beautiful vallies, generally well cultivated, and laid out in rich farms and plantations: in this region, which ever way the eye is turned, it is regaled with an endleſs

leſs variety of pleaſing proſpects: below, the plain delights it with all the regularity of art: if directed upwards, it is never tired with viewing the romantic ſcenes which ariſe from ſo agreeable an aſſemblage of mountains, capped with clouds, ſhaggy woods crowned with perpetual verdure; ſteep precipices and hanging rocks. Here an European may enjoy as cool a climate as he can reaſonable wiſh for: the hotteſt part of the year is from May to October, when the wind is ſouth-eaſterly, with ſmart ſhowers about noon, though ſometimes no rain falls for ſome weeks: the nights are foggy, or rather the air being loaded with vapours, which the heat of the day has cauſed it to abſorb; and as that heat abates, being unable to ſuſpend them any longer in intimate union with itſelf, that moiſture is thrown off in the form of clouds, which are ſtill augmented in this

woody

woody region, by the copious exhalations of the earth and vegetables, which retain warmth longer than the circumambient air; and theſe clouds hang about the upper part of the mountains till they are again united by the ſun with the reſt of the atmoſphere, or are ſwept away by the morning breeze. At this time of the year the thermometer commonly ſtands, at ſun-riſe, at about 70° and riſes by noon to ſome degrees above 80; but very ſeldom ſo high as 85° or 86°. In the months of May and October, it ſometimes rains inceſſantly, and the weather is ſo raw and cold as frequently to render a fire neceſſary. In November or December, the north wind ſets in, and continues till May. As long as this wind blows, the nights are clear, and the days are cool and dry, except that, now and then, a tranſient ſhower falls. Indeed, when this wind

wind blows ſtrongly, the cold is quite intenſe for this latitude, and obliges us to keep a conſtant fire. On the 15th of this inſtant (January at 7 o'clock in the morning), the mercury in my thermometer was depreſſed to 51° at this place; which, though cool, is none of the coldeſt in the iſland. A prodigious quantity of rain falls in the courſe of a year, and the air is always ſo moiſt that metals will ruſt, however great the care taken of them: lixivial ſalts can ſcarcely be ſo cloſely corked in bottles, but they will diſſolve; and wearing apparel, and whatever elſe that is in the leaſt liable to grow mouldy, is kept in cheſts; and, where the air is confined, cannot be preſerved from it but by frequently expoſing them to the ſun. In the low lands it rains but ſeldom, and when it does, it deſcends in torrents; but, in the mountains, the rain falls oftener and more gradually. In

the

the ſummer months it thunders and lightens often, though ſeldom violently. Luidas, whoſe ſituation is nearly the centre of the iſland, is remarkably healthy, and agrees extremely well with the conſtitutions of thoſe who come to reſide here immediately from Europe. But thoſe who, having lived long in the low lands, have had their blood wrought up into a putreſcent ſtate by the heat, and require a conſtant and copious perſpiration to carry off the recrementitious part of the fluids, are generally ſubject to an annual attack of an intermittent fever, when the north wind firſt ſets in. However, reſidence here for a conſiderable time, together with conſtant exerciſe, has reſtored the health of thoſe whoſe viſcera were prodigiouſly obſtructed, and conſtitutions quite broken by wrong treatment, and frequent returns of intermittents. The only febrile diſeaſes

which people are commonly liable to here, are remittents and intermittents, which generally ariſe from ſome caſual ſtoppage of perſpiration, and, if properly treated, are the eaſieſt to cure I ever met with. In ſix months practice, during which time, out of between ſix and ſeven hundred Negroes, together with ſome White people, I have ſeldom had leſs than thirty patients at a time: I have never ſeen one ill of any continual fever, either inflammatory, or putrid, except the Small-Pox, which have lately invaded us, and ſuch as are merely ſymptomatical.

Thus, Sir, I have given you a ſmall ſketch of that part of the natural hiſtory of this iſland, which is more immediately connected with the cauſes of diſeaſes, and may be preparatory to any obſervations I may at any time hereafter have it in my power to tranſmit to you; at leaſt it will

will ſerve to ſhew, that Jamaica is not too hot, or ſo unhealthy a place as is commonly imagined. The medium heat at noon, in by far the greateſt part of the iſland, is about the 80° of Fahrenheit's ſcale; and the great mortality that happens at Kingſton, Spaniſh Town, and the reſt of the low lands, is more owing to the imprudence, intemperance, and debauchery of the inhabitants, than to any real malignity of the climate.

I hope, Sir, you will look with an indulgent eye on this weak attempt to gratify your curioſity, and eſteem me your moſt ſincere,

And moſt obedient,

Humble ſervant,

Luidas, Jamaica,
Jan. 18, 1768.

J. QUIER."

THE

THE beſt preſervatives of health for Europeans in this country are,

1. *A dry, healthy ſituation.*

2. *Temperance*, both with reſpect to eating and drinking, particularly on their firſt arrival.

THE diet ought to be compoſed of a mixture of animal and of vegetable food, but inclining moſt to the vegetable: freſh meat, fowl, and fiſh, combined with vegetables, make a wholeſome diet; and the moderate uſe of the mild, pleaſant, ſubacid and acid fruits, and of the ſpiceries which nature has bountifully provided in this iſland, contributes greatly to prevent the tendency of the ſolids to relaxation, and of the fluids to putrefaction.

This climate requires the moderate uſe of wine, and the free uſe of cooling, ſubacid liquors. A few glaſſes of Madeira, or of any other wholeſome ſound wine, at meals, contribute to

the preſervation of health. The beſt drink is water mixed with a little wine, or very weak punch made with ripe fruit. Formerly the iſland was more covered with wood, and the inhabitants uſed to live more on animal food, and to indulge in the uſe of ſtrong liquors; the lower claſs drank freely of new rum, and the better ſort indulged in debaucheries, both of eating and drinking; the conſequences of which were, that numbers of new-comers died ſoon after their arrival; and the *Yellow*, and the *Bilious Intermitting Fever*, the *Dry Belly-ach*, and *Dropſies*, were very frequent amongſt all claſſes of people, and hurried many to their graves; whereas now that the iſland is more cleared of wood, and more cultivated, and the inhabitants have become more temperate, uſe leſs ſpirits, and more vegetable food, they enjoy better health, and live in general to a greater age.

3. *Early*

3. *Early riſing.* This is particularly wholeſome, and the author of the Hiſtory of Jamaica, publiſhed in 1774, ſays, that no man ever attained to longevity here, who was not an early riſer; nor are any ſo healthy as thoſe who addict themſelves to this practice; and that the morning air is here delightfully cool, and the moſt agreeable time for exerciſe.

4. *Moderate Exerciſe.* It is difficult to ſay what degree of exerciſe is requiſite; this muſt be proportioned to the ſtrength and conſtitution of the individual; but the weakeſt are ſtrengthened by it, and the ſtrongeſt become weak without it. Violent exerciſe, eſpecially in the heat of the ſun, ought to be avoided; and the beſt time for uſing exerciſe is before, or juſt about, ſun-riſe.

5. *Cleanlineſs and Bathing.* Nothing contributes more to the preſer-

vation of health, in all climates, than the keeping the body clean. The author of the Hiſtory of Jamaica ſays, that the utility of bathing is univerſally known in this iſland; and that the middle of the day is the time fitteſt for this purpoſe, in water which has been placed for ſome hours in the ſun-ſhine, ſo as to acquire a tolerable degree of warmth: the negroes waſh in the open rivers at that time, having, by experience, diſcovered it to be the moſt wholeſome; and that bathing in cold water is not proper, except at a very early hour, before ſun-riſe; many fatal accidents having happened from people plunging into cold water in the heat of the day in this country.

6. *Change of cloaths and of linen* ſo ſoon as one comes home after being wetted with rain, or overheated with violent exerciſe; many having been hurried to their graves by fevers

vers and other diſorders, from neglecting theſe precautions.

7. *Care* not to expoſe one's ſelf wantonly to the damps of the night, nor to lie down to ſleep on the graſs, nor in moiſt or in woody places in day.

8. *The accommodating the dreſs to the circumſtances of the weather*; and taking care not to expoſe one's ſelf to the breeze, with no other covering but the ſhirt, when heated by exerciſe or wine, or at any time when in a profuſe ſweat; and in bed at nights, to be rather warmer cloathed than in the heat of the day. Moſt late medical writers think that a light, looſe dreſs would be better adapted in that climate, both for keeping out the heat, and defending the body from cold winds and moiſture, than the tight European dreſs at preſent uſed.

9. And

9. And laſtly, *ſuch means as ſerve to ſupport the ſpirits*; for nothing has been obſerved to contribute more to the preſervation of health, than a chearful diſpoſition of mind, without any apprehenſion of danger; and nothing more to the production of diſeaſes, than fear and dejection of ſpirits.

People reſiding in low and unwholeſome places, when attacked with diſeaſes, ought to change their habitation to a place that is more dry and healthy, particularly in the ſickly ſeaſon.

And if Intermitting or Remitting Fevers continue obſtinate, or if the diſeaſes conſequent of them, come on, or there is room to think that they are approaching, the inhabitants often go a cruize to ſea in a king's ſhip, or go to North America, or come to Great Britain, as the only means left for the recovery of health.

If people, on firſt entering into warm climates, are attacked with inflammatory diſorders, they may be blooded freely; but afterwards they do not eaſily bear copious evacuations, but require to have them made in ſmaller quantities, and very early and frequent, as inflammations make a rapid progreſs in theſe climates. In the Weſt Indies, *Putrid Fevers* admit only of very moderate bleeding on the firſt or ſecond days, ſeldom later than the third; and, in ſuch caſes, the quantity taken away muſt be determined by the preſent circumſtances of the patient; and, if the patient be weak and the pulſe low, it is often right to omit this evacuation altogether.

It ought to be obſerved, that, on the firſt attack of all feveriſh diſorders in warm climates, nothing in general is of more ſervice than to empty thoroughly the firſt paſſages,

which are commonly loaded with putrid bile, and other corrupted humors, which, if not discharged, are absorbed, and give rise to very troublesome and very dangerous symptoms. In several of the West India islands, they now, on the first attack of fever, or sickness at the stomach, give a vomit of two or three grains of tartar emetic dissolved in water, and afterwards, a dose of some mild purgative medicine; and find, that if it does not prevent the fever, that it commonly renders it mild, and soon brings about an intermission, in which the bark may be administered with advantage.

LET-

LETTER I.

An Account of the Succeſs of Inoculation for the Small-Pox at Jamaica.

SIR,

IN my laſt letter I acquainted you that the ſmall-pox had juſt then made their appearance in my neighbourhood. Since that time I have had great opportunities of making obſervations on that diſeaſe, both in its natural ſtate, and when raiſed by inoculation. The following ſheets were wrote about the end of the

year 1768, and the beginning of 1769, with an intention originally of being tranſmitted to you. As in the letter with which you have lately honoured me, you deſire to know what methods I find moſt ſucceſsful in my practice, and as I believe there have been few accounts received in Europe of the practice of inoculation in this part of the world, I have, in purſuit of my firſt deſign, reviſed theſe obſervations, and ſent them to you, hoping, that from the peculiar circumſtances under which we practiſe in this country, they may at leaſt gratify your curioſity; and ſhould they, through your means, prove of any advantage to mankind, I ſhall think my pains abundantly rewarded. I am, with the ſincereſt reſpect, Sir,

Your moſt obedient,

and moſt humble ſervant,

JAMAICA, JUNE 30, 1770.

J. QUIER.

FROM

FROM the time of my arrival in Jamaica, in the beginning of July 1767, to the end of February 1768, the weather was remarkably wet; the winter was cold, raw, and uncomfortable, the north winds conſtantly bringing with them thick miſts, and involving us in clouds of ſmall driving rain. About the beginning of March the weather ſet in extremely fair and beautiful, and continued uncommonly dry to the beginning of the enſuing October; the May rains, which uſed to pour down inceſſantly for many days together, were intirely wanting, and only a tranſient ſhower fell now and then during the whole period; the trade or eaſterly wind blew longer and with more force every day than uſual; the night fogs were light, and towards the end of the ſummer almoſt intirely diſappeared; the mercury generally ſtood, about two or three o'clock in the

afternoon when it riſes higheſt, between the eightieth and eighty-fifth degree on Fahrenheit's ſcale; but through the ſmartneſs of the breeze the weather was very cool to ſenſe, and extremely pleaſant. However, the heat of the ſun, the exceſſive drought, and the breeze ſo dried the earth, that its ſurface was every where cracked into innumerable chaſms; the herbage was intirely burnt up, and the ſprings of water failed in many parts of the country.

The ſmall-pox had for ſome time been epidemical in the towns, but were brought into this neighbourhood by ſome new negroes, a little after Chriſtmas, 1767. The diſeaſe at firſt was pretty mild, and only a negro here and there was ſeized with it; but about the end of February 1768, notwithſtanding all the precautions that could be uſed, it ſpread itſelf apace, and grew more fatal.

At firſt the pox, when not favourable, were of the lymphatic ſort; but as the ſummer advanced they were generally ſmall and warty, ſuppurated very imperfectly, and the depreſſed apex of each had commonly a black ſpot in it. They were ſometimes attended with petechiæ at the eruption; in one caſe I ſaw likewiſe a profuſe hæmorrhage by the noſe and uterus, at that period: indeed the tendency to putrefaction was very great in general. One inſtance occurred in a lady of fortune, of ſeveral gangrenes coming on in different parts of the body, very early in the diſeaſe, and ſome days before her death. However, the ſtate of the atmoſphere at this time ſhewed its effects; not unfrequently, in a kind of puſtules different from thoſe juſt mentioned. Theſe were a kind of ſiliquoſe ſmall-pox, very ſeſſile, being undiſtended with any fluid, and like bits of

ſhriveled ſkin. This ſpecies of pox was often very confluent, and reſembled nothing ſo much as large veſications, out of which the lymph had been diſcharged by puncture.

INOCULATION had been frequently practiſed with ſucceſs in this country, according to the methods formerly in uſe; and the extraordinary accounts which continually arrived here of the great improvements which that art had lately received in England, rendered people in general very much diſpoſed to favour a practice which had ſo great a chance of ſecuring their property, now in ſo much danger from the ſmall-pox being epidemical, almoſt throughout the iſland. But no perſon, that I know of, can ſo juſtly claim the merit of introducing the preſent method of inoculation into common practice, as your friend Mr. Gordon; who, being but lately returned from Europe, very obligingly

obligingly imparted to his acquaintance the particulars he had obſerved during the inoculation of his ſon in England, by Sutton. Some copies likewiſe of Dr. Dimſdale's treatiſe on this ſubject, were ſent over by the agent for the iſland; and the rules he lays down were generally followed by practitioners here. But although theſe rules may be very well calculated for a colder climate, and the obſervations are in general very juſt, and I ſhall readily acknowledge myſelf much obliged to that gentleman for the lights I received from his treatiſe, yet I muſt take the liberty to ſay, that I am very confident that his method has been too cloſely and too indiſcriminately purſued in this part of the world, eſpecially in the preparation for inoculation, and the treatment of the natural ſmall-pox.

Many particulars relating to this method of inoculation had come to

my knowledge before my departure from England; and my own experience having long convinced me, that, unleſs in thoſe weak conſtitutions where the fluids are in a watery ſtate, and in thoſe where there is previouſly a putrid diſſolution of the blood, contagious fevers are generally treated in the firſt ſtage of the diſeaſe with too hot a regimen; which, by keeping up too quick a circulation, and too great a degree of animal heat, both increaſes the activity of the putrid ferment, and renders the blood more diſpoſed to receive its impreſſion. I was glad to find that ſo ſucceſsful a ſtand was at length made againſt popular prejudices, and that the precepts of Rhazes, Sydenham, and Boerhaave, when united into one practical ſyſtem, proved of ſo much advantage to mankind.

I firſt began to inoculate about the middle of March 1768; and by the end of the ſummer, near ſeven hundred

dred negroes paſſed through the diſeaſe, under my care.

The dry conſtitution of the atmoſphere at this time was very favourable for inoculation, as the ſlaves conſtantly went through their daily labour in the field during the whole proceſs; thoſe only excepted who had a higher degree of fever than uſual at the eruption, or had their feet and hands ſo beſet with puſtules that they could not walk, or hold the utenſils of their labour, of which ſome inſtances occurred.

The ſubjects beſt adapted for undergoing this proceſs, ſeem to be thoſe who are moſt hale and ſtrong, and conſequently moſt capable of bearing mercurial medicines, and copious evacuations by purging. I know no objections but what ariſe, 1. from too tender infancy; 2. from great debility from old age, want of food, and long diſeaſes; 3. from a putrid

putrid or a watery diſſolution of the blood; 4. from the preſence of ſome acute diſeaſe; and 5. from too advanced a ſtate of gravidity.

NOTHING can be more erroneous than the opinion, that children have the ſmall-pox from inoculation more favourably than adults; ſince, beſides the various accidental indiſpoſitions to which that tender age is ſubject during the proceſs, the puſtules are almoſt always more numerous in them than in grown perſons, even although the latter may labour under ſuch chronical diſeaſes as are ſuppoſed to ariſe from a very depraved ſtate of the fluids. However, children may be inoculated with a great deal of ſafety, at leaſt in this country; neither is there ſo much danger from the diſeaſes more particularly incident to this age, as has been ſometimes apprehended. I have conducted many through this proceſs, who were not more

more than a month old at the beginning of the preparation. It is true a great deal of care and circumſpection is requiſite to prevent accidents; but the danger which might be expected from dentition, is very well guarded againſt, by keeping the body open; and by the mercurials given in the preparation, which generally cleanſe the bowels of worms: at leaſt I never ſaw more than one inſtance of convulſions from the latter cauſe, which were eaſily remedied; and as for dentition, I have often obſerved teeth making their appearance during inoculation, without any, or at moſt with very little, inconvenience.

PREGNANCY is no obſtacle to this proceſs during the firſt ſix or ſeven months of geſtation *; afterwards I

 think

* N. B, Some gentlemen in London, who have peruſed this paper in manuſcript, have entertained ſome doubts about the propriety of inoculating gravid

thing there is danger of abortion; not ſo much from the violence of the diſeaſe, as from the neceſſary method of preparation.

A caution has been given to avoid the intervention of the menſtrual flux in women, during inoculation; and, I doubt not, very juſtly in the more delicate part of the ſex. But in our

gravid women in this country, and think that it ought not to be attempted without an abſolute neceſſity; particularly with women of faſhion, and of delicate conſtitutions, as it may ſometimes be attended with danger.

Negro women and others of hardy conſtitutions, who are much expoſed to the open air, often bear children, and go about their daily labour in a day or two afterwards, and undergo many other things without the leaſt inconvenience, which would be in danger of deſtroying thoſe of delicate habits, who have been educated in European luxury.

However, theſe gentlemen think, that when all the other negroes of a Weſt India plantation are to be inoculated, it may be ſometimes proper to inoculate the pregnant women at the ſame time as here recommended; particularly if a natural confluent or malignant ſmall-pox is frequent in the neighbourhood.

practice,

practice, as we were generally obliged to inoculate all the ſlaves on a plantation at once, and as the ſtupidity of negroes is ſo great, that it is frequently impoſſible to diſcover when a woman had that diſcharge laſt on her, or when its return might next be expected, this would have been a matter of the greateſt difficulty, and is, I believe, of but little importance in this ſort of ſubjects; as I am confident, that out of the number of females which I have inoculated, a great many muſt have had their menſes during the diſeaſe; but one inſtance however of an uterine hæmorrhage came to my knowledge, which happened after long obſtructions, and was eaſily ſtopped by ſome opiates, and a few doſes of the bark and ſtyptic tincture.

That theory which held infancy to be the propereſt age for inoculation, ſuppoſed likewiſe that a very bland

bland ſtate of the humours was abſolutely requiſite to the ſucceſs of this proceſs. The late innovators in this art in England, diſcovered by experience, that a greater latitude might be admitted of in this reſpect in the choice of their ſubjects. The peculiarity of our ſituation in this part of the world, rather than temerity, has enabled us perhaps to carry this point ſtill farther. Venereal complaints, both recent and inveterate; the elephantiaſis *; the yaws, both in children and adults; and all the other various kinds of cutaneous foulneſſes that occur here, and which are very numerous; and inveterate ulcers were found to admit of inoculation, with as great ſucceſs as thoſe conſtitutions

* Not that kind of leproſy deſcribed under the name of elephantiaſis, by Aretæus; but that other ſort of elephantiaſis, mentioned by Proſp. Alpinus, de Med. Ægypti, lib. i. cap. 14. *Vagatur et altera elephantiaſis*, &c.

in

in which no deviation could be diſcovered from the moſt perfect ſtate of health. Indeed I do not remember to have ſeen the diſeaſe more favourable at any time than in moſt of thoſe patients. It is true, that at firſt I made them undergo a longer and ſtricter preparation; but experience afterwards taught me, that this in moſt caſes was quite unneceſſary; the yaws eſpecially do not in the leaſt require it. Is there from hence any reaſon to think, that the received opinion, of the propereſt diſpoſition of the body for producing a mild and favourable ſmall-pox, is ill founded; and that in theſe deviations from a natural ſtate, the humours are indiſpoſed to receive the impreſſion of the variolous ferment? or may it be imagined, that the tendency of the morbid matter in moſt of thoſe diſeaſes towards the ſkin, has any influence on the nature of the ſubſequent

quent pox? It is certain that the natural ſmall-pox, in thoſe who have the yaws, are moſt commonly very mild; and as certain that thoſe from inoculation in healthy ſucking children, whoſe fluids may be preſumed to be the moſt free from acrimony, are generally ſevere. This queſtion I ſhall leave to be determined by future inquirers. In the mean time, however, I will venture to offer it as my opinion, that the pre-diſpoſition of the body is a matter of but little importance, if there are no impediments, eſpecially from want of ſtrength, to the uſe of mercurials and cathartics: and I am inclined to believe, that the ſmall portion of the effects of thoſe medicines that is tranſmitted to the child with the nurſe's milk, and the general and juſt timidity in giving them to ſucking children themſelves, are the ſole cauſe of the ſeverity of the diſeaſe in them;

for

for thoſe that are old enough to be weaned, and to take theſe medicines freely, have the ſmall-pox as favourably as any other ſubjects.

I have inoculated many very old people of both ſexes very ſucceſsfully; and I think old age affords no objection to this proceſs, if unattended by ſuch debility as renders the patient incapable of undergoing the neceſſary evacuations.

In an intermittent fever, I made uſe of the uſual purgatives, and mercurial powder, as preparatives both for the ſmall-pox, and the bark; which the patient took till near the eruption, and had the diſeaſe in a very ſlight manner, and without any inconvenience from the intermittent.

A young woman, who had laboured under a violent dyſpnœa for half a year, occaſioned by vomicæ in her lungs, was inoculated. The diſeaſe was very favourable, and from this

time ſhe expectorated copiouſly, and breathed with freedom. She lived now with tolerable eaſe, and had a chance of protracting her life for ſome time; but about ſix months after the inoculation, growing impatient, ſhe eagerly ſolicited leave to go to the low lands, which her maſter, unable to reſiſt her entreaties, notwithſtanding the conſequences were fully repreſented to him, at length granted her. After this ſhe found her health grow worſe daily, and attempted to return home; but as ſhe was travelling in the broiling heat of the ſun, in the forenoon, expired on the road.

I ſhall now acquaint you with the circumſtances of three caſes, which proved fatal, where I was compelled to inoculate againſt my judgement and my will, partly through the apparent impoſſibility of the patient's eſcaping the contagion in the natural way of infection, and partly through

the preſſing inſtances of their maſters; which will likewiſe ſerve to illuſtrate ſome things that I have already advanced.

1ſt. The firſt was of a man between ſeventy and eighty years of age, ſo extremely weak and emaciated with want of food, that he had not been able to crawl out of his hut for a long time. He was ſupported by all poſſible means, but died during the eruptive fever, before any puſtules appeared. The inciſions were however conſiderably inflamed, and had ſuppurated before his death.

2d. A woman with child, who ſince her pregnancy had been ſalivated for the venereal diſeaſe, was brought to me, with others, to be inoculated. As is uſually the caſe, ſhe knew not how far her gravidity was advanced: from the ſize of her belly, which was but ſmall, I gueſſed not farther than the ſeventh month.

The day after the inſition, ſhe was brought to bed of a mature child. The mother ſuffered not the leaſt from child-birth, and had only a very ſmall number of puſtules. The child was inoculated on the ſixth day of its age; and a very confluent kind of ſmall-pox ſucceeded, of which it died.

3d. A woman was inoculated, together with her child, about five weeks after her lying-in. The mother having very little milk in her breaſt, and another nurſe not being to be procured, I was apprehenſive of the inefficacy of the preparation of the child, and ventured to give it half a grain of calomel twice. Nevertheleſs the ſmall-pox were extremely confluent, and the child died. The mother had the diſeaſe very favourably.

The food allowed to ſlaves, during the whole proceſs, was generally the roots, and other vegetable ſubſtances, which at all times make up the greateſt

greateſt part of their nouriſhment; ſuch as yams, cocos or eddas, potatoes, plantains, bananas, &c. Their drink was water, or beverage*. All poſſible precautions were taken to keep from them, rum, herrings, ſalt-fiſh, fleſh of every kind, ſalt, and the aromatics, which are the natural produce of the country. If the mercury at any time fixed upon the ſalivary glands, or affected the gums, or if the patients were more than uſually indiſpoſed about the time of the eruption, flower or rice was given them.

With regard to the preparative medicines, after trying various experiments, I gave the preference to the calomel, and emetic tartar, in the proportion of eight grains of the former, to one-eighth of a grain of the latter, and joined with ſome teſ-

* So they call here a drink made with water and ſugar, or with the addition of ſome lime or lemon juice.

taceous powder, equal in weight to the calomel, as recommended by Baron Dimſdale. The purgative that I generally uſed, after the mercurial powder, was jalap mixed with an equal quantity of cream of tartar. Five or ſix grains of calomel is a ſufficient doſe for the ſtrongeſt grown negroe; and ſo ſmall a quantity, but once repeated, many times brought on a copious ſpitting. The greateſt fault committed by inoculators in this country, I apprehend, was the not proportioning the length of the time of preparation, and the number of the doſes of the preparative medicines, to the conſtitutions of their patients. Mercury has in this climate a prodigious propenſity to ſalivate. The greater number of negroes have likewiſe been frequently taking mercurials for venereal complaints: many of them have their fluids ſo impregnated wirh them, that a very ſmall quantity

quantity more is ſufficient to determine them towards the fauces, and ſometimes with ſuch force, that when a ſpitting is attempted to be raiſed, if much caution is not uſed, there is danger of inſtantaneous ſuffocation. Negroes likewiſe cannot bear frequent repetitions of ſtrong purgatives. The conſequence of ſuch copious evacuations is almoſt always a tendency to a dropſy.

If any preparation is thought neceſſary, two doſes of the mercurial medicines, and as many purgatives, with an interval of three or four days between them, are ſufficient. Near three hundred of the laſt ſlaves that I inoculated, went through the diſeaſe without any preparation, either by food or medicines, previous to the inſition. Of theſe ſome took the mercurial medicine at night, and the cathartic next morning, and were immediately afterwards infected; ſome

were infected firſt, and then took theſe medicines on the following night and morning.

When the preparation was uſed, the diſeaſe was ſo far milder, that a great number, indeed the greateſt part of the patients, if they were not made to work conſtantly in the field, had either no puſtules, or ſuch as never came to ſuppuration, or a cluſter only round one or both inciſions. In the other method the ſmall-pox were as favourable as any one could wiſh; and the appearance and regular progreſs of the puſtules through their ſeveral ſtages, prevented likewiſe any cavils about the reality of the diſeaſe, from the uncertainty whether or not the patient had formerly had it.

When a woman had a child at her breaſt, if both were to be inoculated, I found it beſt to uſe the preparation; and in the interval between the mo-

ther's two doſes of preparative medicines, to give the child from one grain and an half to three grains of the mercurial powder, according to its age, at night, and a gentle purgative next morning. If only the child was to be inoculated, about four days after the mother had taken once of the mercurial and cathartic, ſuch a doſe of the former as I juſt now mentioned was given to the child, who was next morning, after taking a purge, infected; and on the evening of the third day from the inſition, and on the enſuing morning, the mother's medicines were repeated.

NOTWITHSTANDING I have inoculated many ſucking children, after giving the preparative medicines to the mothers only; I am convinced from experience, that it is proper to make the child likewiſe take once of each, before the inſition; and that calomel, from half a grain to one

and

and an half, may be borne, even by that tender age, in this country, with great ſafety. Indeed I have commonly obſerved, in the courſe of my practice in inoculation, that mercury very ſeldom affects the ſalivary glands of thoſe who have not yet reached, or are not much paſſed, the time of puberty; and that they can bear that medicine in a much greater proportion to their age, than adults.

In preparing pregnant women, both the mercurial and cathartic ſhould be given in very moderate quantities; eſpecially if that ſtate is a little advanced; and, in general, I think it more adviſeable in theſe caſes, to give three very gentle doſes of each, than, by giving a ſmaller number, to excite too great a commotion each time.

In inſerting the variolous contagion, although I endeavoured to make the ſlighteſt ſcratch poſſible through

through the cuticle, I always took care to impregnate the inciſion well, by wiping the point of the lancet on it, and even by adding more matter to it, if that appeared neceſſary. By which means it ſcarce ever happened that the patient was not infected; and the trouble of repeating the inoculation, and the riſk of the contagion being communicated in the natural way, were prevented.

Except in five or ſix caſes, I always took the matter warm from a ſubject preſent at the time. Any humidity, either in the puſtules of the natural diſeaſe, or of the inoculated ſmall-pox, or in the inciſions, is capable of communicating the infection. I have uſed the lymph as ſoon as it began to be collected in the inciſions; the crude ichor of the natural and inoculated pox; the concocted pus of all three; and the matter almoſt concreted under their ſcabs,

ſcabs, in the exſiccation, with equal ſucceſs.

THE quality of the ſmall-pox, from which the matter is taken for inſition, ſeems to have no influence on the ſubſequent diſeaſe, which I have known extremely favourable, when the contagion was communicated from a very confluent ſort, of which the patient died; and, on the contrary, have ſeen the puſtules pretty numerous, when the matter had been taken from a perſon who had been inoculated.

THERE is no danger of introducing too great a quantity of the contagion into the body; and as there ſeems to be no other inconvenience from the number of the inciſions, than the inflammation and pain that attend them, as many may be ſafely uſed as will render the infection moſt certain of ſucceeding; I have therefore always uſed one on each arm,

which

which I have generally found ſufficient.

If, by the fifth, ſixth, or ſeventh day, no inflammation, or ſign of the infection, appears in the inciſions, the inoculation muſt be repeated, either in the arms or thighs; and I have been told by ſome people, that they have been frequently unable to communicate the contagion, till the ſixth or ſeventh operation. This however has ſcarce ever happened to me; and I have commonly found, when the infection has not taken place at firſt, that the patient had either had the ſmall-pox before, or had a conſtitution at this time inſuſceptible of the diſeaſe. And I am inclined to attribute the failure of the inoculation ſo often, to the uſing only one inciſion at a time, and the not ſufficiently impregnating it with the variolous matter.

I HAVE ſometimes obſerved, that no ſign of the infection appeared on the fifth or ſixth day, and have conſequently repeated the operation; but have afterwards found, that the contagion had been at firſt communicated: and it is generally obſervable, that the former and latter inciſions advance with an equal pace to maturation.

IT ſometimes happened that the patient had been infected in the natural way before the inoculation; but I could not find that the diſeaſe was in the leaſt more ſevere, from the contagion being accumulated; as in all the inſtances of this ſort that occurred to me, the pox were favourable, except in one ſucking child, who died of a confluent kind. In this caſe the inciſions were ſometimes a little inflamed, ſometimes ſcarce perceptibly, and ſometimes the puſtules were more numerous round them,

them, than in other parts of the body.

I uſed no dreſſings to the inciſions, unleſs towards the end of the diſeaſe; when, if they were ulcerated, as frequently was the caſe, ſome ſoft application was neceſſary.

On the evening of the third day from the inſition incluſive, I found it proper, if the mercury had not affected the patient's mouth, to give a ſmall doſe of calomel and emetic tartar, in the proportion of three grains of the former to one-tenth of a grain of the latter, as directed by Baron Dimſdale; varying the doſe according to the patient's age, ſo that the calomel never exceeded three grains for an adult: and leſſening the proportion of the tartar emetic for children. But in thoſe caſes where the patient was infected, either immediately before, or immediately after taking one doſe of the mercurial

powder

powder and a cathartic, without any preparatory regimen being previouſly obſerved, I cauſed the mercurial to be repeated at this time, in its full doſe, and the cathartic on the following morning.

On the fourth day from the inſition, (except in thoſe caſes which I have juſt mentioned, when it was deferred longer,) I commonly began the uſe of a purging infuſion, made with ſena, cryſtals of tartar, and ſal cathartic. amar. to which, when ſtrained, an equal quantity of melaſſes was added. Of this a ſufficient quantity was given once or twice a day, to procure two or three ſtools daily, till the eruption was compleated. This infuſion was likewiſe a very convenient cathartic for children, as well in the preparation as at any other time of the diſeaſe.

Dr. Dimſdale has deſcribed the phænomena of this diſeaſe, from the inſition

inſition to the compleat eruption, with great accuracy; I ſhall have therefore but little to ſay on that ſubject.

The earlier and more conſiderable the inflammation of the inciſions appears, the more favourable in general will be the ſubſequent diſeaſe. About the fifth day the part round the wound grows very tumid, and the itching becomes painful. About the ſixth or ſeventh, a good deal of lymph is collected, under a ſcab like the eſchar of a burn, or in a veſicle, and a number of ſmall puſtules commonly appear round the inciſions; ſometimes no pimples ariſe, but the whole part becomes a large phlegmon. About this time, and ſometimes earlier, the axillery glands begin to inflame.

If the inciſions continue till the ſeventh or eight day, with very little tumor and inflammation, I have

found it expedient to follow the advice of Baron Dimſdale, in repeating the doſe of the mercurial powder given on the third evening after the inoculation. The reaſon of this will hereafter appear. This powder promotes the inflammation of the inciſions, and accelerates the eruption.

The eruptive ſymptoms commonly began about the eighth or ninth day, ſometimes later; in children frequently as early as the ſixth. Now and then a pain of the head and back, and a feveriſh heat, came on at night, periodically, as early as the fourth day from the inſition. Sometimes theſe paroxyſms were pretty ſmart. The bark, joined to the uſe of the laxative infuſion, commonly gave relief. However, theſe ſymptoms, when left to themſelves, never laſted longer than till the termination of the uſual time of the eruption, and were certain ſigns of the mildneſs of the

the future diſeaſe; the puſtules, which ſucceeded them, ſometimes diſappearing after two or three days, without ſuppurating; at other times only a pimple appearing here and there, three or four days after the feveriſh ſymptoms had ceaſed.

The ſymptoms which uſually preceded the eruption, were pain in the head and back, drowſineſs and ineptitude to motion, an accelerated pulſe, conſiderable thirſt, a dry tongue, and a hot ſkin. Nauſea and vomiting I never obſerved among the eruptive ſymptoms of either the inoculated or natural ſmall-pox, in this country.

It now and then happened, that, a day or two before the eruption, the ſkin of the face and breaſt, and ſometimes of the whole trunk and extremities, was marbled with a very florid efflorescence, which a regimen or medicines, ever ſo little cordial or

diaphoretic, would raiſe into an erysipelatous raſh. This phænomenon was merely the effect of the mercury and emetic tartar, which, after the appearance of this ſymptom, was by no means to be repeated. And ſo far was it from being expedient to deſiſt from the uſual antiphlogiſtic courſe, that it was now more than ever neceſſary; it was requiſite for the patient to be conſtantly in the open air, in the ſhade, and for his body to be kept open; by which means the efflorescence generally diſappeared in about three days. This phænomenon was moſt frequent in children affected with the yaws, and was always ſucceeded by an early and very mild eruption.

Not unfrequently, ſo little tumult was excited in the conſtitution of the patient by the eruption, that he followed his uſual occupation in the field, as well at this time, as through every

every other part of the proceſs *. Very often however it was neceſſary to give him a relaxation from his labour, during the continuance of the eruptive ſymptoms, which uſually laſted from one to three days; through the day he was ordered

* It may not be amiſs to inſert here the following remarkable caſe, which I can aver to be fact: The eruption of the natural ſmall-pox appeared on a mulatto boy, of about ten years of age, without his complaining of any indiſpoſition, as he was running almoſt naked, in very wet dirty weather. The overſeer of the eſtate happening to ſee him very much bedaubed with mud, and not ſuſpecting that he had the ſmall-pox, ordered him to go and waſh himſelf, which he did, by immerging himſelf in a ſtream of running water. Soon afterwards, in the evening, he came to me, complaining of anxiety and oppreſſion about his heart; but knew not of his being affected with any other ailment. I found the puſtules of the ſmall-pox pretty numerous all over his body, but diſtinct; and his pulſe rather ſmall and quick. I immediately ordered him to be put into a warm hut, and gave him ſome doſes of the pulv. contray. comp. On the next morning I found him perfectly well, the variolous affection of his ſkin only excepted; and from this time he had no further occaſion for the help of medicine.

to keep himſelf conſtantly in motion, in the open air, in the ſhade, and to drink frequent draughts of cold water. Some ſtools were likewiſe procured every day by the laxative infuſion; the uſe of which was continued from the fourth day after the inoculation, till the eruption was compleated. If the fever and its concomitant ſymptoms were ſeverer, or continued longer than uſual, a repetition of the doſe of calomel * and emetic tartar given on the third evening after the inſition, was found extremely conducive towards facilitating the eruption, and removing the ſymptoms which preceded it.

If at this time, or earlier, before the appearance of the febrile ſymptoms, the patient's mouth happened to be affected with the mercurial, the further uſe of that medicine was thereby intirely precluded. Cold air

* Calomel, or mercurius albus dulcis 7s ſublimatus.

and

and cold water were not however found prejudicial. The mouth was frequently gargled with ſome emollient decoction; the food uſed was of the ſofteſt kind, ſuch as flower pap, boiled rice, &c. and the body was kept conſtantly lax; by which means this inconvenience was commonly removed in a few days. But if the afflux to the fauces was pretty violent, and did not eaſily ſubſide, a doſe of flores ſulphuris, given morning and night, was found of great ſervice. A ſalivation however, although troubleſome to the patient, was not obſerved to have any bad effect on the diſeaſe.

In ſucking children I likewiſe found it convenient to keep the body gently lax, during the continuance of the eruptive ſymptoms, as thereby the convulſions, ſo incident to that tender age at this time, ſeemed to be prevented. One caſe only of that

ſort occurred to me; but a clyſter being injected, and a few drops of laudanum, with ſome teſtaceous powder given after it, the eruption was accelerated, and the ſpaſms eaſily allayed.

After the eruption was compleated, there were very few working ſlaves, who could not follow their uſual occupations, to whom liberty was given to ſhelter themſelves on the approach of rain; but all their care and agility could not prevent their being ſometimes caught in a ſhower; from whence, however, I never ſaw any inconvenience ariſe.

The bland, temperate diet, formerly mentioned, was continued to the compleat exſiccation of the puſtules; when commonly one, or at moſt two doſes, of ſome gentle cathartic, finiſhed the proceſs.

It ſometimes happened, that, after the eruption, young children were

troubled with gripings, and looſe acid ſtools, which made them very croſs and reſtleſs, and tended greatly to exhauſt their ſtrength. In this caſe I found it neceſſary to give them daily ſome doſes of teſtaceous powder, and a few drops of tinct. thebaic. at night. If likewiſe it happened, as ſometimes was the caſe in this tender age, that the puſtules were pretty numerous, and the child was very ſore and uneaſy, a few drops of laudanum at night, or every night and morning, were very beneficial, and greatly ſupported him under the diſeaſe.

I HAVE now faithfully related the practical rules which I followed, and the regimen which I cauſed to be obſerved through the courſe of this proceſs; from whence the extreme mildneſs of the diſeaſe was ſuch, that very frequently when the preparation, previous to the inſertion of the contagion,

gion, was uſed, either no puſtules were produced, or, when an eruption appeared, no ſuppuration ſucceeded. As however the appearance of the eruption, and the regular progreſs of the puſtules through the ſeveral ſtages of inflammation, maturation, and exſiccation, have uſually been regarded as certain criteria of this diſeaſe, and ſome doubts have been entertained, from the abſence of theſe ſymptoms, of the patients having been really infected with the ſmall-pox; I have commonly of choice made uſe of the humour of the inciſions of thoſe patients for infecting others, and have never failed of exciting the diſeaſe, with as much certainty of ſucceſs from thence, as when the contagion had been taken from the natural ſmall-pox. To this poſſibly it may be objected, that the variolous ferment, being introduced into the inciſion, may inflame the part, and aſ-

ſimilate the juices contained therein into its own nature, ſo far as to enable the pus, formed from them, to excite the diſeaſe when infuſed into another body, in the ſame manner as we ſee a ſmall portion of the venereal virus, when admitted into the urethra, raiſes an inflammation, and brings on a diſcharge of matter capable of producing the venereal diſeaſe in all its various ſhapes, when applied to any ſoft, tender, irritable part of the human body; although the perſon from whom that matter came may continue untainted in his conſtitution, and recover of the local injury by means of that diſcharge, without the aid of medicine.

To place this point in a ſtate of a great certainty as its nature will admit of, I made numerous repetitions of the inoculation in the ſame patients, with no effect in any one perſon, whom I had judged, from the

appear-

appearance of the firſt inciſions, to have been truly infected. There are beſides ſome certain phænomena which can hardly eſcape a careful obſerver, and are pretty demonſtrative ſigns of the morbific miaſma being introduced into the maſs of blood. One of theſe, and the moſt obvious to our notice, is the enlargement, ſoreneſs, and tingling ſenſation of the axillary glands, from the acrimony of the contagion, abſorbed by the lymphatics from the inciſions, and carried through thoſe glands in its paſſage to the ſanguiferous veſſels. When, from a ſimilar abſorption of the venereal virus, the inguinal glands are affected in a like manner, it is commonly agreed that the patient's habit will be more or leſs tainted, unleſs thoſe glands are brought to ſuppuration; a courſe, which, though undoubtedly the moſt proper to prevent the further progreſs of the ferment,

is

is yet by no means entitled to an implicit confidence in it for a perfect cure. That the variolous contagion is not intercepted in its courſe through the axillary glands, is in ſome meaſure evident, from the pain of the head though ſlight, the chillineſs, ſhiverings, and the ſubſequent febricula, to be obſerved commonly in the evening, or night, about the uſual time of the eruption, and ſometimes much earlier, and very ſoon after the inſition, of which I have already taken notice. It is moreover not uncommon for a few ſcattered pimples to appear five or ſix days after the uſual time of eruption, and the intire ceſſation of the febricula, which ſometimes maturate, but very frequently diſappear without any ſuppuration.

To theſe conſiderations it muſt likewiſe be added, that if theſe patients had not really undergone that change

change in their conſtitutions, that rendered them incapable of receiving any future impreſſion of the variolous miaſma, it is impoſſible to conceive that ſuch numbers would univerſally have eſcaped the infection in the natural way, from thoſe who were inoculated, either at the ſame time with, or after themſelves, and lived in common with them; as alſo from thoſe who had the natural diſeaſe, of whom ſome lay in the ſame huts, and to whom I have known ſome of theſe patients perform the office of nurſes.

Upon the whole then, I think, we have all the evidence that a ſubject of this nature will admit of, till the experience of a courſe of years has fully eſtabliſhed the truth, that a perſon who has gone through inoculation in this extremely mild way, is no further obnoxious to the contagion. This perhaps may receive ſome ſmall weight, from reflecting in

how ſlight a manner the natural ſmall-pox have ſometimes occurred; and how ſurpriſingly ſmall a number of puſtules have in ſome inſtances appeared. And poſſibly it may not be altogether abſurd to ſuppoſe, that nature does not in this, more than in moſt other febrile diſeaſes, abſolutely and invariably addict herſelf to one particular critical evacuation. And hence perhaps it is that ſome perſons, in whom no variolous eruption * had been obſerved in the courſe of any fever, have been thought, although they lived almoſt perpetually expoſed to the infection, to have paſſed their whole lives unattacked by this diſeaſe; in which number were the celebrated Boerhaave, and his colleague Profeſſor Schacht; to whom many more inſtances might eaſily be added.

* Hîc nihil repugnet, morbus varioloſus ſæpe ſine variolis ſit. *Boerhaave, Aphor.* § 1393.

It being no eaſy matter always to diſcover whether a ſlave had or had not formerly paſſed through the ſmall-pox, the variolous matter was ſometimes unavoidably inſerted into thoſe who had had the diſeaſe before in the natural way. In theſe perſons the inciſions were frequently ſomewhat inflamed; and ſometimes a little ichor was collected in them: very little attention however was requiſite to diſtinguiſh this caſe from that exceedingly gentle ſtate of the diſeaſe I have juſt mentioned; in which the inciſions were moſt commonly remarkably inflamed and tumid, and ſuppurated largely: but here the inflammation always ſubſided, and the inciſions were compleatly exſiccated, before the uſual time of the eruption; the axillary glands were never affected, neither did any feveriſh ſymptoms enſue.

THERE ſeems likewiſe to occur now and then, in perſons who are pretty certainly known not to have had the ſmall-pox, ſuch a ſtate of the conſtitution as is incapable for the preſent time of being infected. The phænomena of the inciſions are much the ſame as in thoſe who have already gone through the diſeaſe; and however often the inoculation be repeated, either no inflammation ſucceeds, or, if it does ſucceed, it diſappears again within a few days.

BEFORE I put an end to this letter, it may not be amiſs to ſubjoin a few obſervations on thoſe morbid affections which occurred to me ſubſequent to inoculation; and of which, either the diſeaſe itſelf, or the manner of treating it, ſeemed to be a remoter cauſe. The moſt frequent of theſe were dry ophthalmies. Inflammations of the eyes are at all times extremely common amongſt negroes in

this iſland; but I doubt not but many of thoſe which happened to people who had lately been inoculated, were in conſequence of the ſmall-pox; which I am the more inclined to believe, as I found them manifeſtly more obſtinate than uſual. Theſe ophthalmies requïred copious bleeding, and repeated antiphlogiſtic purges, a cooling regimen, with plenty of nitre, and the application of emollient poultices to the eyes. But, after the evacuations by bleeding and purging, nothing was found more advantageous than bliſters applied behind the ears, and to the ſides of the neck, from which a diſcharge was conſtantly kept up till the inflammation ceaſed.

A CASE or two occurred to me of the impetigo, or ring-worm, as it is called here, ſucceeding the inoculated ſmall-pox, and appeared to me to proceed from the diſpoſition, which

the conſtitution had acquired from the treatment of the ſmall-pox, to protrude whatever lurked in it noxious to health, on the external habit. The impetigo in theſe caſes, though the moſt extenſive I ever ſaw, yielded readily to ſulphur, given internally, and the external application of mercurial and ſulphur ointments.

In another caſe, of a grown woman, who had ſome time before been inoculated, an eruption appeared on her body, very ſimilar at firſt to the impetigo. I gave her ſome flor. ſulphur. tempered with nitre. When I ſaw her again, the eruption had ſpread over her whole ſkin, which was very tumid and inflamed. I now ſaw plainly that this was an eryſipelas, of the ſame kind as that which I have already mentioned, as ſometimes occurring previous to the eruption of the ſmall-pox; I therefore took ſome blood from her immediately, and

gave her a gentle cathartic, and put her afterwards upon a cooling regimen; but I could not prevent matter being formed under the cuticle, almoſt as much as if ſhe had had the confluent ſmall-pox; her lower extremities eſpecially were quite raw. But notwithſtanding this, neither fever, anxiety, ſickneſs at ſtomach, nor any other ill ſymptom, attended her at any time of the diſeaſe; from which, by the uſe of fomentations, and proper methods to abſorb the pus, and to keep her eaſy, ſhe ſoon recovered, and does not now retain the leaſt mark of the calamity ſhe ſuffered.

THESE were the only morbid affections that occurred in my practice, in conſequence of inoculation. Very few they certainly were, if compared with what uſually happen after the old method of inoculation, or the natural ſmall-pox; which pretty plainly proves,

proves, that ſuch parts of the humours, as had undergone the action of the variolous ferment, were thoroughly diſcharged by the emunctories, and that the body was not left very particularly diſpoſed to any new diſeaſe.

THESE, Sir, are the remarks which I have thought proper to tranſmit to you on the method of inoculation, which I have found ſucceſsful in this country; the practical obſervations in which you may depend upon to be ſtrictly matters of fact.

LETTER II.

Dear Sir, JAMAICA, March 28, 1773.

I Am much obliged to you, for the trouble you have taken with the paper on Inoculation; and am glad to find, that it has been thought capable of being, in any wife, uſeful.

THE note, you have inſerted concerning gravid women, claims likewiſe my acknowledgements; as every one might not perhaps have recollected that the ſubjects, I every where ſpeak of, were negroes; and from thence,

thence, if what I have wrote ſhould be thought to merit imitation, perſons might have been admitted to inoculation, to whom it never was my intention to recommend it; and I might unknowingly have occaſioned miſchief. But, whatever hardineſs negroes may poſſeſs, I do not find, that the females enjoy that immunity from the evils of child-bearing, at leaſt in this country, that you ſeem to imagine. A negro woman, after lying-in, is here carefully nurſed for a fortnight; and excuſed from all kinds of labour, and perhaps does not come out of her houſe, for a month; and I believe I may ſafely ſay, that the accidents attendant on child-birth happen fully as often to theſe people, as to the ruſtic part of their ſex in Europe. But be this as it may, theſe negro pregnant women did as well here, with the cautions I have given, as any other ſubjects;

and bore a very large proportion to the whole number of thoſe I inoculated, and not a ſingle inſtance of abortion happened.

SINCE I wrote that paper I have inoculated again, but met with nothing new to be obſerved: I am however confirmed in the opinion, that no perſon in a ſtate of debility, from whatever cauſe it may proceed, ought to be inoculated, even with the view of his being able to be ſupported under the diſeaſe with food and medicines. I intended, during the laſt ſummer, to reſume inoculation, if my attendance on Sir Charles Price, and the ill ſtate of my health afterwards, had not prevented it; which I the more regret, as I purpoſed to inoculate again *gratis* all thoſe who four years before had the ſmall-pox in ſo extremely ſlight a manner; and to endeavour to determine whether

thoſe

thoſe people are any further obnoxious to that diſeaſe.

My ſentiments, with reſpect to the principles of inoculation, are ſtill the ſame; and I am more convinced of the truth of what I ſaid concerning the manner of the operation of cold water; which I find by experience to raiſe a ſweat, whenever there are no impurities in the firſt paſſages, and to be ſafely drank during a ſweat in a fever, and to keep it up plentifully. If the ſtomach and bowels are loaded with bilious or other noxious matter, cold water then as certainly, brings on vomiting, or purging, or both.

The new method of treating the inoculated ſmall-pox was found very detrimental, when applied to the natural diſeaſe, in this country; and I attribute the uncommon mortality, in the year 1768, chiefly to that cauſe.

cauſe. There was a manifeſt, and prodigious difference, between the effects of the mercurial and antimonial medicine, and purges, when uſed before, or at leaſt at the ſame time with the infection, and when given not before the variolous poiſon had ſpread its influence through the whole frame, and ſhewed its preſence by the ſymptoms it produced. It frequently happened, that the fever was totally ſuppreſſed by the time of the complete eruption; but the puſtules ſeldom maturated, but generally continued crude, and in many never came to exſiccation, except juſt in the face; whilſt the extremities diſcharged great quantities of thin ichor, the patient grew daily weaker and weaker, and ſunk at length under the diſeaſe.

An obſervation or two, which I made on the natural ſmall-pox, perhaps

haps you may not be diſpleaſed with.

I. About the time of the incruſtation of the puſtules I obſerved ſeveral negroes, on whom they were numerous, to be taken very ſuddenly with a ſevere fever, reſtleſſneſs, and delirium. At firſt I miſtook theſe ſymptoms for the uſual ſecondary fever; and the patient, in whom they occurred, died, as I believe, from thence, before I diſcovered their cauſe. From ſome complaints, theſe people uttered in their more lucid intervals, and from noticing their being remarkably affected, if any thing touched their feet, I was induced to examine them; and found the cuticle of their ſoles to be raiſed and diſtended with pus; for the matter formed by the ſuppuration of the puſtules under this cuticle, which in negroes, who go barefoot, is as thick

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as the ſole of a ſhoe, not being able to get a vent, had ſeparated it from the ſkin of the whole bottoms of the feet, and being there pent up, by irritating the extremely ſenſible naked papillæ of the ſkin, produced theſe ſymptoms; which, after the cuticle of the ſoles of the feet was taken off, by the uſe of fomentations and ſoft dreſſings, were brought to ſubſide without any difficulty.

II. When the exſiccation of the puſtules was nearly compleated, it frequently happened, that large ſwellings of the feet and legs came on; which ſoon ulcerated, and diſcharged prodigious quantities of ſharp ichor. It being a cuſtom with the negro nurſes to foment theſe ulcers with warm urine: as I ſaw no reaſon to object to it, I permitted them to take their own way, and uſed no other application but cerat. pulotic; and,

as

as I thought nature, in theſe caſes, did her own buſineſs much better, than art could pretend to do it, I avoided the uſe of any medicines, till the diſcharge began to ceaſe, and the ſores ſhewed a diſpoſition to heal; when a few doſes of purging phyſic were given. Theſe caſes never failed to do well.

III. The ſecondary fever of the ſmall-pox, as moſt all fevers are in this country, is of the remittent or intermittent kind. As ſoon as ever it began, if there was yet only a partial exſiccation of the puſtules, I endeavoured to carry downwards the colluvies of the inteſtinal canal by clyſters, and kept up as large a diſcharge as poſſible by means of veſicatories. When the incruſtation was completed, I then had recourſe to purgatives. But what I have chiefly to remark is the ex-

extreme uſefulneſs of Peruvian bark in theſe caſes; which I was induced to give, from conſidering how much this fever, in that epidemic, partook, both in its cauſe and effects, of the nature of a purulent fever.

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LETTER III.

SIR,

JAMAICA,
April 27, 2774.

SINCE I wrote to you my letter on the ſubject of Inoculation for the ſmall-pox in this country, I have had further opportunity of exerciſing this branch of medicine; but the occurrences and ſucceſs being the ſame as formerly, I had no particular obſervation worth tranſmitting to you till lately. About the middle of laſt December, a negro ill of the ſmall-pox happened to be brought into

into this neighbourhood; upon which I had immediate recourſe to inoculation, and, by the beginning of February, one hundred and forty-ſix people paſſed through the proceſs under my care, without the loſs of a ſingle individual. Of theſe people one hundred and twenty were children, fifty of which were at the breaſt; the reſt were either new negroes, or people removed hither from other parts of the country, ſince the preceding inoculation. On forty-nine other ſlaves I alſo made ſome experiments, which I thought might tend further to enlighten this ſubject. The reſult of theſe experiments, and ſome remarks, which occurred to me in courſe of this inoculation, as I apprehend may correct, or illuſtrate what I ſaid in my former letter, I beg leave to communicate to you.

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As in negro practice the nature of things will hardly permit a choice of the patients to be inoculated, it muſt neceſſarily be ſuppoſed, that many of them are very ineligible ſubjects. The greateſt difficulty ariſes from want of ſtrength to bear the regimen, and the operation of the preparative medicines. As my experience by no means favours the total omiſſion of the mercurial medicine and purgatives, I have endeavoured to uſe them ſo as their operation might weaken the patient as little as poſſible, who at the ſame time was well ſupported with proper food: but I have chiefly to obſerve, that a conſtant uſe of the Peruvian bark, except during the time of the eruptive fever, has, in theſe caſes, ſucceeded greatly to my ſatisfaction.

A celebrated writer has deſcribed a caſe in which the malignant confluent ſmall-pox ſucceeded the uſe of

the mercurial corroſive ſublimate*. Two of the elder children, whom I ſucceſsfully inoculated, had been taking that medicine for the yaws; but the following caſe comes nearer to the point. A middle-aged woman was ſalivated by unction, about three years ſince, for a venereal ulcer in her throat; of this complaint ſhe appeared to be perfectly cured, as ſhe enjoyed exceeding good health for more than two years afterwards; conceived, and was delivered of a child. This child happened to get the yaws, the poiſonous ichor of its ſores occaſioned large ſpreading ulcerations both of the mother's breaſts, and of a great part of her right-hand and arm. On this account, as external applications alone availed nothing, ſhe was directed to take the ſolution of corroſive ſublimate; which

* De Haen Rat. Medeſi. Cap. 15.

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accordingly ſhe did, for more than ſix months, until at length ſhe deſiſted, in order to be inoculated for the ſmall-pox; which ſhe paſſed through with very little indiſpoſition, and, I believe, the number of puſtules did not exceed fifty.

WHAT I wrote relative to the inoculation of pregnant women in my former letter, I ſincerely believed to be true, and I can poſitively affirm, that I did not know of its being attended with a ſingle inſtance of abortion, in the whole courſe of my practice in 1768. As however I find that many doubts and objections have been raiſed on this head, I have taken the pains to make a ſtrict inquiry, and will candidly acknowledge, that I am now told, that two negro women miſcarried, ſome ſhort time after they had returned to their uſual courſe of life; but my aſſiſtance not being wanted, no complaint

was ever made to me on that ſubject. Amongſt thoſe, whom I inoculated at this time, were only two pregnant women, one in the fifth, and the other in the ſixth month of geſtation; who paſſed through the ſmall-pox with very little indiſpoſition, and had only an exceeding ſmall number of puſtules, and not the leaſt ſymptom of a tendency towards abortion. Both thoſe women were diſcharged from my care in good health, and returned to their accuſtomed way of life; but, about a fortnight afterwards, one of them caught a venereal infection attended with a ſevere ſtrangury, and miſcarried a month from the completion of the proceſs: the other was attacked, about the ſame time, with a remitting fever accompanied with a dyſentery and teneſmus; during which complaints ſhe had ſome ſymptoms of an impending miſcarriage, but recovered

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ſo far, that I no longer apprehended any danger, when on the fortieth day after the ſmall-pox were perfectly over, ſhe was taken ſuddenly with labour-pains, and was delivered of a living child, which ſurvived its birth about an hour. Both theſe patients did well without any difficulty. As for the two former caſes, it is impoſſible, at this diſtance of time, to ſay whether or not the abortion was occaſioned by the inoculation; and, with reſpect to the two latter, I believe no one will deny, that cauſes ſubſiſted, after and intirely independent of the ſmall-pox, fully ſufficient to produce that effect. But granting that they all proceeded from inoculation, I do not conceive, that the expediency of admitting negro ſubjects, under that circumſtance, to this proceſs, with a proper degree of prudence, will be thereby invalidated, as the danger of abortion in

them, and that of the natural ſmall-pox, do not appear to me, to be capable of any kind of compariſon. This, however, is only mentioned as my private opinion, which I ſhall leave to others, and to future experience to determine.

The uſual diſorders of infancy are perhaps as common, and as ſevere in negro children, as in thoſe of any people whatever; but, notwithſtanding this, I have inoculated them, now as well as formerly, with very great ſucceſs; and have ſo often ſeen teeth, of all the ſeveral kinds, make their way through the gums, during the proceſs, and ſometimes at the very time of the eruptive ſymptoms, with ſo little inconvenience, merely through the body being kept open; and I have found any diſorder of the ſtomach and bowels, which happened ſo eaſy to be remedied by the common method, which every practitioner

is

is acquainted with, that I believe proper care and attention will ſeldom fail, to prevent any diſagreeable accident. From hence, however, I would not be underſtood, to recommend theſe as proper ſubjects, when a more advanced age can with ſafety be waited for, as I think the contrary evident both from reaſon and experience. I have now likewiſe met with but one inſtance of convulſions, and that only of one very ſlight fit, at the time of the eruption. The child's belly was already looſe, and two or three drops of tinct. thebaica were all the medicine, that I found I had occaſion for.

Unless where particular circumſtances required a particular method of treatment, I followed the ſame general rules of practice which I formerly deſcribed; except only that, as I have found ſucking children ſo

much diſpoſed to have a larger crop of puſtules than others, although I met with no inſtance where the mother and child were both to be inoculated together, I proceeded in the ſame manner as I had formerly done when that was the caſe; or if the child was more than two years old, but not yet weaned, I made the mother take once, and the child twice of the preparative medicines, before the inſition; and in general I did not begin the uſe of the laxative infuſion ſo early, as I mentioned in my former letter: indeed in children I very often found ſuch a tendency to purge, during the eruptive ſymptoms, that I had little or no occaſion to have recourſe to it at all.

THERE is a method, which is ſometimes uſed, of communicating the diſeaſe with matter, which has been dried on the point of a lancet. This method

method I have very ſeldom practiſed, and would on no account recommend, as I think I have obſerved, that ſuch dangerous miſtakes may eaſily ariſe from it, as the moſt ſcrupulous attention will be neceſſary to avoid. It is to be obſerved, that the day after the inoculation, the wound, when made with a lancet, on which the matter has been dried, is moſt commonly as much, or more inflamed, than on the fifth, when the matter is taken freſh from a ſubject preſent. About the third day this inflammation begins to ſubſide: after that, if the infection ſucceeds, the inciſion gradually inflames again. This ſuggeſted to me the following remark. When the freſh fluid matter is uſed, the clean keen lancet only divides the cuticle, no digeſtion of the wound follows, and the inflammation and ſuppuration, which enſue, are purely the effects of the

virus

virus of the ſmall-pox. But, on the contrary, when the matter has been ſuffered to dry on the lancet, however it may be moiſtened with warm water, or otherwiſe, the point of the lancet will nevertheleſs be ſo clogged, and blunted by the clotted pus, as to render it ſcarce poſſible to avoid uſing ſuch force, in making the inciſion, as will continue the wound into the true ſkin; the conſequence of which will be a ſpeedy inflammation, and digeſtion of that wound, and by the diſcharge, I am confident, the variolous infection will ſometimes be carried off. Of this, I think, I have plainly ſeen two inſtances. One was in my own practice: the firſt infection not having taken place, in a child about five years old, for the ſake of greater conveniency, it was inoculated again: the firſt inciſions inflamed very early, collected and diſcharged matter,

ter, but had very little of the uſual humour and hardneſs round them, and that gradually decreaſed as the ordinary time of the eruption approached; wherefore ſix days afterwards I again repeated the inoculation; on the eighth day the child grew feveriſh, and on the tenth the eruption of the ſmall-pox appeared. As the fever proceeded, the laſt inciſions became more and more inflamed, whereas the preceding healed intirely. I have no doubt but this child received the infection, in the natural way, from ſome others, who had been inoculated a little before it, from whom I could have taken freſh liquid matter, if this had not been objected to, becauſe they had the yaws. The diſeaſe was exceedingly mild, and terminated happily. In the other inſtance, I was requeſted to ſee a child, who was ill of a fever with an eruption on its ſkin: I found the

the diſorder to be the malignant confluent ſmall-pox, and was told, that the child had been inoculated about a month before, in the manner above mentioned, that the inciſions had been ſomewhat inflamed, and had diſcharged matter, but that no eruption had followed, and it was uncertain, whether there had been any fever.—This child died. The difference in the ſeverity of the diſeaſe, in theſe two caſes, I ſuppoſe, proceeded from hence: the former child was under the regimen obſerved in inoculation, during the whole time it was under the action of the variolous poiſon, whereas the latter, after taking a purge, had returned to its uſual way of living, and, I preſume, had been crammed with many prepoſterous kinds of food, before and after it had received the infection.

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I have always found the exanthemata, which now and then appear about the time of the eruption, however alarming they ſometimes may have ſeemed to the inexperienced, not only to be perfectly void of danger, but even to be a certain ſign of the mildneſs of the ſubſequent ſmall-pox; indeed very commonly in theſe caſes there is no eruption at all. Theſe exanthemata put on very different appearances, in different people: ſometimes I have ſeen a raſh, much reſembling the firſt eruption of the confluent ſmall-pox, equally ſpread over the whole ſkin; at other times collected into cluſters not unlike the meaſles; again I have known an efflorescence begin very much in the form of the eſſera, when the tumours dilating themſelves, and running one into another, ſoon became large erysipelatous inflammations; and ſometimes an inflammation, of this kind,

was

was extended uniformly over the whole ſurface of the body. I have never ſeen this eryſipelas, or raſh, continue longer than three days, or attended with anxiety or ſickneſs at ſtomach; but frequently with great heat, and itching of the ſkin: and have always purſued the antiphlogiſtic method of cure. This affection of the ſkin I have alſo met with in thoſe, who had already had the ſmall-pox, after taking calomel and emetic tartar. The moſt remarkable inſtance, I have known, was in the ſame woman, whoſe whole cuticle was ſeparated from her ſkin by ſuppuration, as I have related, towards the end of my former letter on this ſubject. When I lately began to inoculate, this woman having a child at her breaſt, I directed ten grains of the mercurial powder to be given to her at night, and half a drachm of the purging powder next morning:

on the third day I found her in a ſtrong fever, with an eryſipelatous raſh over her whole body; I cauſed her immediately to be blooded, gave her a nitrous medicine, and put her on a cooling regimen: after this the fever ſubſided; but within a few days her whole cuticle, except that of the palms of her hands, and the ſoles of her feet, came off in the form of dry ſcales. Another caſe, very ſimilar to the preceding, occurred about the ſame time, in a negro girl, who had been inoculated in 1768*. I likewiſe ſaw a raſh, accompanied with ſweating, on the fifth day after the inſition in a negro man, who afterwards appeared to have had the ſmall-pox before. Whatever good effect this mercurial medicine may have in inoculation, the benefit ſeems to have been, hitherto,

* See alſo Baron Dimſdale's Treatiſe, Caſe 14.

referred

referred intirely to its operation in the inteſtines; but Inoculators would do well, carefully to obſerve the phænomena it produces on the external habit, and then to conſider whether the idea, that the ſucceſs of the preſent method proceeds ſolely from ſuppreſſing, and repelling the eruption, be well founded; at leaſt ſo far as this medicine is concerned.

After the eruptive ſymptoms are over, if the patient obſerves the proper rules of diet, it is but ſeldom, that any thing further, whether it reſpect regimen or medicine, is of any conſequence; but when a numerous crop of puſtules indicates a conſiderable quantity of variolous matter to have been generated, as ſometimes happens in negro ſucking children, through the perverſeneſs of their mothers, whom I have ſeveral times detected in ſuch monſtrous irregularities,

regularities, as greatly alarmed me with apprehenſion of an unfortunate event, it does not appear to me expedient, to purſue any longer indiſcriminately, the ſame method of treatment as before; as cold air, cold water, and purgatives, however well calculated to impede the progreſs of the variolous ferment, are now no longer requiſite on that account, and will certainly retard the ſuppuration of the puſtules, and the due diſcharge of the corrupted humours by the ſkin, the moſt natural way of evacuating them, at this time of the diſeaſe. Indeed nature, if not officiouſly obſtructed, will ſeldom fail to do her own buſineſs extremely well. In theſe caſes I always order the ſick to be kept within doors, but without fire, or any extraordinary quantity of clothing; the drinks they uſe are warm; if the heat of the ſkin be unuſually great, and the

inflammation of the puſtules occaſion any ſymptomatic feveriſhneſs, more or leſs of nitre is given; and if reſtleſsneſs at night be troubleſome, an opiate is adminiſtred in the evening; but at the ſame time I take care, that the belly be kept rather lax than coſtive.

One caſe occurred to me of two eruptions. A very moderate number of puſtules appeared at the uſual time, on a young negro woman, and the fever, which had been rather ſeverer than common, left her: three days afterwards I diſcovered on her hands and arms, what at firſt I took to be an eryſipelas, but which ſoon proved to be cluſters of confluent pox: theſe were but few and ſmall above the elbows, but on the forearms and backs of the hands and fingers were numerous and large, and formed veſications diſtended with a great quantity of lymph. This woman

man had been notoriouſly guilty of tranſgreſſing the rules of diet; but ſhe ſuffered no other inconvenience from the ſecond eruption, beſides a conſiderable degree of pain from the inflammation of the parts affected, and a greater length of the cure, through the plentiful diſcharge from the veſications.

I HAVE now met with one caſe, and that the only one, of a puſtule on the corner of the eye. The inflammation, which accompanied it, was but ſlight, and yielded readily to the external application of a weak ſolution of white vitriol and ſaccharum ſaturni; and what little opacity of the membrane remained afterwards, was eaſily removed by inſtilling twice a day, into the eye, a few drops of the juice expreſſed from the bark of the root of the *bocconix*; ſo that now the cicatrix is but juſt

perceivable *. It may, perhaps, be no difficult matter to prevent puſtules affecting this part, by uſing external repellent applications, before and during the eruptive ſymptoms of the ſmall-pox; and although this happens ſo very ſeldom in inoculation, yet, as it is an accident of the moſt diſagreeable conſequence, and cannot be perfectly remedied, when it once appears, it does not ſeem, that any pains and diligence to guard againſt it, however often they may be unneceſſary, can be ill employed.

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* The juice of the bark of the root of this plant is incomparably the beſt medicine that I have ever ſeen uſed, for reſolving albugines of the cornea. When the inflammation is removed, a few drops may be inſtilled into the eye two or three times a day. If the acrimony of the juice ſhould be greater than the eye can bear, as ſometimes is the caſe, eſpecially when it is firſt uſed, it may be diluted with a little new milk. Unleſs the ſtructure of the cornea be intirely depraved, in

BESIDES this inſtance of a puſtule on the cornea, I ſaw five or ſix children affected with inflammations of the eyes, either during the ſmall-pox, or after they were over; but theſe were exceedingly ſlight, and required nothing particular, beſides the external application of a weak ſolution of white vitriol and ſacch. ſaturni in the former caſe, and in the latter the ſame medicine, and one or two repetitions of the purgative, always given after the exſiccation of the puſtules.

THE only morbid affections, which I met with, beſides what I have juſt mentioned, in conſequenee of this inoculation, were three caſes of abſceſs, in two of them on the thorax near the axilla, in the other on the humerus a little below the articula-

in conſequence of ſuppuration, or the opacity be very inveterate, this medicine will commonly effect a cure.

tion with the ſcapula; but neither of theſe was a matter of any moment.

As I had not heard that any perſon, who had had the ſmall-pox by inoculation in that exceeding mild way, in which there is either no eruption, or only of ſuch puſtules as never ſuppurate, had ever been inoculated again after a conſiderable length of time, I determined to make the experiment; as I thought, that, by this means, the queſtion might probably be decided, whether, in this caſe, that change is produced in the conſtitution of the human body, which renders it incapable ever afterwards of receiving the variolous infection. For this purpoſe I ſelected thirteen ſubjects, who had had the diſeaſe in this ſlight manner, after being inoculated ſeveral years before, ſome of them by me, and others by other practitioners: into

to each of theſe, after he had taken a doſe of the mercurial medicine and a purge, I inſerted the variolous contagion, at an inciſion in each arm; but the effects produced thereby, were in no reſpect different from thoſe to be obſerved, in conſequence of the ſame experiment, made in ſuch people, as have had the ſmall-pox before in the natural way; as I ſhall by and by explain more fully. To this may be added that, as it appeared to be unneceſſary, from any apprehenſions of the contagion ſpreading, to ſeparate the inoculated patients from the other negroes, who had had the diſeaſe in the ſame manner before, they all lived promiſcuouſly together; yet none of theſe, although many of them dwelled in the ſame houſes with the former, and ſome of the women had ſucking children at their breaſts under inoculation, caught the

infection; ſo that I have not the leaſt doubt, but that, with a due ſhare of attention, for otherwiſe a deception may happen, the practitioner may always be able, to pronounce with certainty whether or not his patient be free from any future danger.

In my former letter on this ſubject, I ſaid that, in thoſe people, who had already gone through the ſmall-pox in the natural way, "the inciſions were frequently ſomewhat inflamed; and ſometimes a little ichor was collected in them; but that the inflammation always ſubſided, and the inciſions were compleatly exſiccated, before the uſual time of the eruption; the axillary glands were never affected, neither did any feveriſh ſymptoms enſue." In conſequence of a large number of experiments, I now find reaſon, to alter my opinion conſiderably on this

point.

point. At different times I have inoculated many people, whom the event has undoubtedly proved to have already had the ſmall-pox in the natural way; and I am now inclined to ſuſpect, that ſome others alſo, whom I imagined from the ſenſation in the axillæ, the feveriſhneſs, and even from the appearance of the inciſions, to have taken the infection, had really had the diſeaſe before.

As I had never obſerved any ill ſymptom ariſe from the virus of the ſmall-pox, in bodies which had already undergone its action at my late inoculation, I communicated the contagion to many people, for the ſole purpoſe of diſcovering whether they had had the diſeaſe before; and to no inconſiderable number of others, who were certainly known to have had it in the natural way, for the ſake of obſerving the phænomena,

which

which might be produced. By theſe experiments I found, that ſometimes, though very ſeldom, the inciſions did not inflame in the leaſt degree, and the virus produced no effect whatever: but moſt commonly more or leſs of inflammation did enſue, and this, very generally, with more expedition, than in thoſe, who are capable of taking the infection; ſo that the part round the inciſion was as tumid in the former caſe on the third day, as in the latter on the fifth: ſometimes the tumour round the inciſion came on ſlowly, and continued to increaſe gradually until the ſeventh or eighth day; very ſeldom longer. Not unfrequently theſe people complained of pain in the axillæ, and ſlight feveriſhneſs, very early, as on the fourth or fifth day; ſometimes later; but always before the uſual time in thoſe who are ſuſceptible of the infection: in many however

however no pain in the arm-pits, or feveriſh ſymptom occurred. When the inflammation was very ſlight, it began to diſappear on the third day: when it advanced with great ſpeed, it was generally pretty conſiderable; but the tumour always ſubſided before, or about the uſual time of the eruptive ſymptoms: ſometimes more or leſs matter was collected in the inciſions, which however was ſoon exſiccated. In theſe caſes, in which the inflammation proceeded more ſlowly, it was ſeldom ſo conſiderable as in the preceding; but commonly collected more pus, and that required a longer time to be concreted into a ſcab. If the inſition was repeated near to the place of the firſt inoculation, it ſometimes produced a little inflammation, but moſt commonly none at all; and if it was repeated ever ſo often afterwards, in that part, it had no effect whatever:

but

but if it was done in ſome other part of the body, it then likewiſe had moſt generally no effect; ſometimes however I have ſeen more or leſs inflammation raiſed, and ſome matter collected; but I never obſerved it ſucceeded by any affection of the lymphatic glands, or any feveriſh ſymptom.

As then theſe caſes are not ſo clearly diſtinguiſhed by the ſymptoms, from ſome which happen when the infection really takes place and the fever is very mild and ſucceeded by no eruption, as to preclude all poſſibility of a miſtake, it may here be aſked, by what ſigns are they to be known from each other? To this it may be anſwered, that

I. The elevation, extent, and hardneſs, of the inflammatory tumour round the inciſions in thoſe who have had the ſmall-pox before, when

when in the higheſt degree, are never equal to what happens in thoſe, who are capable of receiving the infection.

II. When the axillary glands are affected, or any feveriſhneſs appears in the former, both theſe ſymptoms are much more ſlight, and come on much earlier, than they generally do in the latter; in whom whenever the progreſs of the infection is very rapid, the inciſions are always remarkably inflamed, and ſuppurate largely.

III. When the inflammation of the inciſions, in the former, comes on early, and increaſes apace, it ſubſides as expeditiouſly, and is either intirely gone, or greatly abated, about the time when the eruptive fever commonly appears in the latter; whereas, in theſe, the inflammation ſpreads farther in one day, at that time, than during the whole interval from the inoculation till then, and con-

continues to do ſo until that period of the diſeaſe is over.

IV. When the inflammation of the inciſions advances gradually till the uſual time of the eruption, the former caſe may here alſo be known by the tumour and hardneſs beginning to decreaſe, at that time, contrary to what may be ſeen in the latter; in which caſe likewiſe the feveriſh ſymptoms are always much more vehement; indeed where the infection ſucceeds, a ſlight degree of inflammation round the inciſions ſeldom fails to be accompanied with a conſiderable fever, and by the eruption alſo.

These ſigns, if carefully attended to, I believe will rarely fail to enable a practitioner to diſcern whether his patient has had the ſmall-pox before or not: this knowledge is however beſt acquired by practice and obſervation, as it is impoſ-

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ſible for any words to convey an idea of thoſe appearances with that clearneſs and preciſion with which they are conceived by the ſight and touch, which render it no difficult matter, for an attentive obſerver, to pronounce his judgement without heſitation. Moreover, it may be conſidered as an advantage in the caſe in queſtion, that it is of no great conſequence, whether the patient has the ſmall-pox now from the inoculation, or has already had them in the natural way: the principal point to be determined is whether he be any further obnoxious to the variolous contagion. Whenever pain of the axillary glands and feveriſh ſymptoms have indicated, that the virus has been obſorbed and mixed with the maſs of blood, there can be but little room for doubt; if, however, any ſhould remain, I think that this may be removed by repeating the inoculation; and the repetitions

titions ſhould be continued until the utmoſt degree of certainty poſſible be obtained.

PERHAPS it may here be objected, that the conſtitutions of ſome people are found, at certain times, to be inſuſceptible of the variolous contagion; and that, although the ſigns I have juſt deſcribed ſhould plainly ſhew that the preſent inoculation does not take effect, yet, however, many repetitions be made with the ſame ſucceſs, theſe perſons may nevertheleſs be liable to be attacked by the diſeaſe, in the natural way, at ſome future period of their lives. This is a point which I will not take upon me abſolutely to decide; I will however beg leave to ſay, that, whatever may be the caſe with reſpect to the natural way of contracting the ſmall-pox, and although the infection does not ſeldom fail to produce the deſired effect at the firſt,

and perhaps ſeveral ſucceeding trials by inoculation, yet I now very much doubt whether there are any conſtitutions, which have not already undergone the action of the variolous ferment, that at any time are abſolutely incapable of being infected by inſition. This doubt is not founded merely on ſpeculation: many repetitions of the inoculation having failed in 1768, in ſome people, who were very poſitive that they had not had the ſmall-pox before. I lately ſubjected ſeveral of them again to the experiment; but although the ſymptoms clearly indicated, that the infection was abſorbed and carried into the maſs of blood, yet the phænomena which occurred, were no ways different from thoſe, which appeared, in conſequence of the ſame experiment in ſuch as I was well aſſured had undergone the diſeaſe before; ſo that, whatever theſe peo-

ple thought themſelves, I was well ſatisfied, that this was equally the caſe with them alſo. But as this is a queſtion that merits further inquiry, whenever an opportunity offers again, I ſhall not fail to renew the experiment.

I formerly acquainted you, that, in order to aſcertain the reality of the diſeaſe, I had commonly of choice made uſe of the humour of the inciſions of thoſe patients, on whom either no puſtules appeared, or only ſuch as never came to ſuppuration, for infecting others; and had never failed of exciting the diſeaſe, with as much certainty of ſucceſs from thence, as when the contagion had been taken from the natural ſmall-pox. I now find that this alone is no proof that the variolous poiſon had exerted thoſe general effects in the conſtitutions of thoſe people, from whom the infection was taken, that

that they could properly be ſaid to have had the ſmall-pox at that time; and that what I propoſed as only a plauſible objection, viz. "that the variolous ferment, being introduced into the inciſion, may inflame the part, and aſſimilate the juices contained therein into its own nature, ſo far as to enable the pus, formed from them, to excite the diſeaſe when infuſed into another body," has really a foundation in fact.

As I had often obſerved, that the crude ichor taken from the inciſions, before the diſorder had ſpread further, and while it was yet merely local, was as capable of exciting the ſmall-pox as any other kind of matter; and conſidered, that in every caſe of inoculation, the variolous ferment is multiplied in the inciſions, and that in them is generated the infectious humour, which is abſorbed and carried into the maſs of blood.

I took a reſolution to make an experiment that I thought would throw ſome light on this ſubject. Among the people, who had been inoculated before, into whom I again inſerted the variolous contagion, in order to diſcover whether they were any further obnoxious to the diſeaſe, was a young negro woman, the marks on whoſe arms ſhewed evidently, that the inciſions at her former inoculation had been inflamed, and ſuppurated in the higheſt degree. The inciſions, at this ſecond inoculation, inflamed ſlowly, in the manner already deſcribed, and collected ſome matter; but the woman never felt any unuſual ſenſation in her axillæ, never had the leaſt ſymptom of a fever, nor indeed had the ſlighteſt indiſpoſition of any kind. On the eighth day after the application of the poiſon to this woman, I communicated the infection, with mat-

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ter taken from her arms, to three negro boys: in every one of them all the phænomena, uſually to be obſerved in the inciſions, when the contagion is taken from the natural ſmall-pox, ſucceeded regularly, the fever came on at its proper time, and each of the boys had the eruption; in two of them the puſtules were but few, in the third, I ſuppoſe, from a great part of his preparative medicines having, through a miſtake, been given to another perſon, as I afterwards diſcovered, they were in number, I believe, at leaſt one thouſand five hundred, and proceeded regularly through the ſeveral ſtages of inflammation, ſuppuration, and exſiccation, as is uſual in the natural diſeaſe. One of theſe boys, who had the ſmalleſt number of puſtules, I afterwards inoculated again, but without any other effect

than a ſlight inflammation of the inciſions, which diſappeared in a few days; and all three of them lived for ſeveral weeks in the ſame houſe with others, who had the ſmall-pox after them, without taking any further infection. It therefore appears now to be a certain fact, that the variolous ferment, being introduced by an inciſion into the ſkin of a perſon, who has already had the ſmall-pox, and conſequently is no longer capable of being infected with that diſorder, may raiſe a local inflammation, and aſſimilate the juices contained in the part into its own nature, ſo as to enable the pus formed of them, when infuſed into another body, which has never yet undergone the ſmall-pox, to excite in it that ſpecific diſeaſe.

I will now beg leave, to offer a word or two relative to children born

of

of women, who had the ſmall-pox while they were pregnant with them. It being diſputed, whether theſe children are liable to be infected with this diſorder, it ſeems to me, that both ſides of the queſtion are equally true, in different ſubjects. Amongſt the children, whom I lately inoculated, and who undoubtedly took the infection, ſeveral were the offspring of women, who had undergone that proceſs when with child of them. On the other hand, I was conſulted, ſome time ago, concerning a negro girl born of a woman, who, not long before her lying-in, had the ſmall-pox very ſeverely: I recommended inoculation for determining whether ſhe was liable to the diſorder; but, upon trial, the effects, which ſucceeded, were the ſame, as happen in thoſe, who have gone through

the diſeaſe before; and I have no doubt but that ſhe alſo had it, at the ſame time with her mother.

I am, Sir, your moſt obliged,

and very obedient, humble ſervant,

J. QUIER.

LET-

LETTER IV.

From Dr. Thomas Fraſer, M. D. *of* Antigua *to* Dr. D. Monro, Jermyn-ſtreet, London.

Dear Sir,

ANTIGUA,
May 22, 1756.

I Ought long ago to have returned you thanks for your obliging favour; but, as the ſmall-pox has been epidemic among us lately, my time has been intirely taken up in the care of people labouring under that diſtemper. Theſe, indeed, have been pretty numerous, for we have been intirely free from it for many years,

years, and we of the profeſſion are on theſe occaſions ſo much on horſe-back, that for my own part, while at home, I could hardly muſter up ſpirits to put pen to paper. This hurry is now ſomewhat abated, and I have leiſure now and inclination to think of my friends.

The ſmall-pox no ſooner made its appearance here, than we immediately thought of inoculation; the ſucceſs of which has been ſo remarkable among people of all ages, blacks as well as the other inhabitants, that the moſt obſtinate were at laſt prevailed on to countenance this practice. I myſelf communicated the ſmall-pox to about forty white people in this manner, of whom twenty-one were ſoldiers belonging to Colonel Duroure's regiment, of which I have the care, and conſequently very irregular livers, and much addicted to drink new

rum; the others were of different ages, people of condition in this country, but moſtly full-grown women without any dangerous accident. The ſlaves, who work in the plantations, and on whoſe life the riches of the inhabitants moſtly depend, have alſo been very freely inoculated. Of theſe from two hundred and ſeventy, to three hundred, have been by my direction infected, with the loſs of two out of the number, who had certainly the virus in them previous to the inoculation, as they ſickened in two days after, and had perpetual intercourſe with variolous people. Other gentlemen in practice have had the like ſucceſs, and with little or no preparation, eſpecially in the negroes; for the ſcanty allowance we have for the care of theſe will not afford any great expence of medicines, and is but a pitiful conſideration for the fatigue we undergo

undergo in their ſervice. Reputation, however, as well as conſcience, is not a little concerned in the recovery of theſe patients, and this was always with me a motive to avail myſelf of every artifice that might ſecure a happy event. It is indeed difficult to conceive what preparation can be preferable to ſound health, or what can prove a properer nidus for the reception of the variolous matter, than a body whoſe juices are mild and balſamick, without acrimony of any kind, and ſuch as circulate freely, without exceeding in proportion to the veſſels which contain them. It follows, from this, that theſe previous courſes ought to vary in different ſubjects; and that it is little leſs than empiriciſm to preſcribe without diſtinction what is only adapted to a particular caſe. Too great a fulneſs is itſelf a diſeaſe, or certainly borders upon it,

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and therefore ought, by proper evacuations, to be remedied before infection. Bleeding and purging are therefore not to be diſpenſed with in many conſtitutions; but this does not infer the expediency of them in all. Weakneſs and innanition are not ſo eaſily remedied as their contraries; but perhaps more prejudicial in their conſequences, to a patient who is to ſtruggle with this terrible diſtemper: ſo that ſlight mercurial courſes, eſpecially with Æthiops, ſo univerſally recommended, do not ſeem always neceſſary or even proper. For, I believe it is hitherto a ſecret what effect the variolous poiſon has immediately on our fluids, or whether this be always the ſame. The ſwellings of the face, inflammations of the fauces, throat, &c. the difficult excretion of viſcid ſaliva in theſe caſes, and the ſizy peripneumonic appearance of the blood, ſtrongly

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point out an inflammatory lentor. On the other hand, bloody urine, gangrenous ſpots, petechiæ and hæmorrhages from different outlets, are ſtrong ſigns of a diſſolution.

I am unawares led to write a diſſertation where a letter was only intended, and that on a pretty abſtruſe ſubject; but as I have already engaged, I cannot help adding, that though it is the common-received opinion that inoculation proves mortal where the virus has been received naturally before, yet experience does not confirm this doctrine; for of theſe who were inoculated under my care, five became ſick before the fourth day, and were conſequently within this rule; but of theſe, three had a very favourable eruption, and went through the diſtemper without any bad ſymptoms; the other two, indeed, had the confluent kind and died in the ſecondary fever, though

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one of them I think for want of care. It is, however, right to avoid the ſmall-pox, as much as may be, where inoculation is intended, and to prepare at a diſtance; though I think it not unreaſonable to believe, that if the infection has once begun to act on the blood, ſo as to put the matter to be aſſimilated into motion, any quantity of virus ſuperadded would be unable to increaſe the quantity of that matter, or in other words to produce a more profuſe and conſequently a more dangerous eruption. Fermentation will be raiſed in liquids properly diſpoſed by a proper ferment, without regard to the quantity of that ferment; and perhaps the analogy may not be very diſtant. I never could obſerve the bark of ſervice in the ſecondary fever, eſpecially before bleeding and purging: for this diſtemper ſeems to ariſe from

from a cacochymic fulneſs, which is apt to fall on the lungs, bowels or brain; and till this has been removed by the means above mentioned, the adminiſtration of the bark will be hurtful; as, if I miſtake not, I have ſeen it more than once, by people here giving it promiſcuouſly in every ſtage.

And now Sir I have endeavoured to compenſate for a long ſilence, by a very long and tedious letter: the place of my abode affording no ſubject matter but of this kind.

Pray remember me to all friends, and believe me to be at all times,

Dear Sir,

your moſt obedient, humble ſervant,

T. FRASER.

LET-

LETTER V.

Account of the Meaſles in Jamaica.

Dear Sir,

JAMAICA,
June 28, 1774.

I Hope you will not be diſpleaſed with my tranſmitting to you the following account of a diſeaſe, that has ſometimes occaſioned great mortality in this iſland, and been almoſt equally dreaded with the ſmall-pox; as its manner of appearance in the epidemic I deſcribe, as far as I have

been able to diſcover, was the ſame it has always obſerved in this country, and differed much from what is generally ſeen in Europe.

The meaſles firſt made their appearance within the verge of my practice, in December 1770. In January of the ſucceeding year they ſpread apace, and, during the three following months, were ſo epidemical, that I had ſeldom fewer than one hundred and fifty negroes ill of that diſeaſe at a time.

In this epidemic the fever differed greatly in different people in the manner of its firſt attack. In ſome it began at once with conſiderable violence, and was accompanied, within a day or two, by the eruption; in others it was of a ſlow remittent or intermittent kind, with quotidian paroxyſms, and preceded the eruption for five or ſix days. The uſual ſymptoms of cough, inflamed eyes

and

and throat, anxiety and reſtleſsneſs, were obſerved here in a very great degree. But the moſt certain diagnoſtic of the diſeaſe, in its beginning, and which I do not remember to have found mentioned by any author that I have met with, was, the appearance of the white aphthous ſpecks about the gums, which were always viſible ſeveral days before the eruption, and not unfrequently before the fever began. By this ſymptom I diſcovered ſeveral to be affected with the meaſles, before they were themſelves ſenſible of any indiſpoſition. As the fever increaſed, and the eruption approached, theſe ſpecks ſpread themſelves, together with an eryſipelatous inflammation, over the whole ſurface of the mouth and fauces, as far down as could be ſeen into the pharynx. The cough was ſhort, dry, and tickling, har-

raſſing the patient inceſſantly; but without any conſiderable difficulty of breathing, or ſenſe of oppreſſion at the breaſt in the intermiſſions of coughing; and ſeemed to proceed from the ſame eryſipelatous inflammation being continued along the larynx, trachea, and its branches, quite into the air veſicles of the lungs. The pimples of the eruption did not appear ſo much in cluſters as is uſually the caſe in Europe, but were more ſolitary and diſtinct, larger, more elevated every where above the ſurface of the body, and attended with more intenſe heat and inflammation of the ſkin. As the exanthemata ſpread farther, and grew more numerous, the fever and cough increaſed, and the inflammation of the ſkin, eyes, mouth, and throat, became more intenſe, and ſeemed to be frequently continued quite

quite through the gullet, ſtomach, and inteſtines; the patient being now commonly attacked with moſt enormous gripes and purging, ſometimes of blood and mucus, and often likewiſe with inceſſant vomiting.

About four days from the firſt eruption, the exanthemata generally diſappeared; and at the ſame time, if the patient had proper medical aſſiſtance, the fever likewiſe. But when this was not the caſe, and bleeding had been ſparingly uſed, or intirely omitted, where copious bleeding had been requiſite, I have ſeen inſtances in which the fever increaſed at this time; the inflammation of the fauces changed from an eryſipelatous to a phlegmonic nature; the cough grew more violent; the patient vomited inceſſantly, and was ſeized with a dyſentery attended with acute and conſtant pain of the belly; and

died ſoon after; either from the inflammation of the ſtomach and inteſtines, or from a gangrene ſupervening.

But however judiciouſly the diſeaſe might have been treated, the fever and eruption were generally ſucceeded, ſooner or later, by a flux, in which was voided, ſometimes with, and ſometimes without liquid fæces, a great deal of mucus moſt commonly joined, but not intimately mixed, with blood. The ſtools were preceded by ſharp grippings, and were ſometimes ſo frequent, as to bring the patient into the moſt imminent danger, and in one caſe carried him off very ſuddenly. Beſides the gripes, which preceded the ſtools, the whole abdomen was affected with conſtant pain and ſoreneſs; the dejection of mind and proſtration of ſtrength were

were great; the ſtomach frequently rejected every kind of food; a nauſea and vomiting were ſometimes very urgent; and, if removed, returned again after a ſhort time. The teneſmus occaſioned very commonly in children, a troubleſome protruſion of the rectum through the anus; and, in pregnant women, brought on a diſcharge of blood from the uterus, and ſometimes abortion. The rectum was ſometimes moſt evidently ulcerated. In a boy about ſix years old, who had not been ſufficiently blooded in the febrile ſtage of the diſeaſe, the anus was ulcerated; the true aphthæ, which appeared during the flux, became corroding ulcers, and ſpread over the whole mouth, fauces, and lips; a pimple on the margin of the upper palpebra of the right eye, and a number of faruncles,

which broke out on different parts of the body, eſpecially where bliſters had been applied, were converted into large ulcers, and mortified before his death.

Those who were not attacked with the flux, had boils in different parts of the body, and very commonly an itchy eruption over the whole ſkin: the boils and itchy eruption likewiſe generally ſucceeded the flux, and, whenever they appeared, were ſalutary ſymptoms. In one caſe, where the flux did not ſucceed the fever, the matter, which uſed to be diſcharged that way, was evidently tranſlated to the brain, and occaſioned much danger to the patient *. During the flux, a febrile

* Plato, a ſtout negro man about thirty years old, had no purging after the receſſion of the meaſles. May 16, 1771, he complained yeſterday

brile paroxyſm of ſeveral hours, or a whole day, happened to ſome; and others had an intermittent fever of more or leſs continuance. An inflammatory diatheſis of the conſtitution remained in moſt, who had had the diſeaſe ſeverely, for ſeveral months

day of ſlight tremors, and rejected food; had no ſleep laſt night; took this morning ſal. cathart. amar. ʒvij. with ol. olivar. ℥ſs. which gave him two ſtools only: this was the firſt purge after the meaſles. This evening I was ſent for. The ſymptoms were frequent convulſive tremors; great reſtleſsneſs, and perpetual jactation of his body: he talked nonſenſe, and collected ſtraws from the floor; but when ſpoke to, would recollect himſelf, and anſwer with tolerable coherence; a perpetual ſhort dry cough; reſpiration ſhort, interrupted and laborious; apparently great anxiety; perpetual ſputation; eyes conſtantly in motion, with a very wild look; pulſe low, weak, and remarkably ſlow, but regular; ſkin cold. When aſked where his complaint lay, he ſaid he felt pain in his left ſide and breaſt; if deſired to ſhew where with his hand, applied it to the region of the heart. This day eat nothing. ℞. camphor. gr. v. aſafætid. gr. ij. teſt. oſtreor. pp. q. s. ut ft. pulvis. ſumendus ſextâ quâque horâ cum ſptus.

months afterwards. Some few inſtances occurred of a diſpoſition to a dropſy where the body was extremely reduced by the flux. Thoſe on whom the epidemic exerted its greateſt fury, were the moſt hale, ſtrong, and valuable ſlaves; the worthleſs and lazy, and ſuch as were emaciated through want of food,

ſptus. c. c. guttis xxx. ex infuſo folior. ſalviæ. A bliſter was applied between the ſhoulders: for food weak broth was given often, in ſmall quantities. 17th. He ſlept a little laſt night, but complained of pain in his head. The ſame ſymptoms as yeſterday, with this difference, that he was now more ſenſible, and anſwered, when ſpoke to, with more coherence. No ſtool ſince yeſterday before noon. Bliſters were applied to his head and thighs, and a clyſter injected in the evening: the medicine continued as before. 20th. All the nervous and ſpaſmodic ſymptoms removed: he grew better on the 18th. The medicine ordered to be taken now only three times a day. As he complained much of the ſoreneſs occaſioned by the bliſters, and of want of ſleep at night, fifteen drops of tinct. thebaica were directed to be given at night, as long as requiſite. 23d. No other complaint but of weakneſs.

eating dirt, or ſevere uſage, had ſcarce any indiſpoſition.

The ſymptoms, which I have related, naturally diſtinguiſhed the diſeaſe into two periods, the febrile and the dyſenteric; the curative indications of which being very different, I will now ſeparately deſcribe the method of treatment, which I found by experience to ſucceed beſt in each.

I. In the febrile ſtage of the diſeaſe no one died, notwithſtanding many were in the greateſt danger: the ſafety however of the patient, in the dyſenteric and moſt dangerous period, depended chiefly on the method of cure made uſe of in the former. As I conſtantly obſerved, that the moſt robuſt people, and thoſe in whom the fever and inflammatory ſymptoms roſe higheſt, were always attacked with the ſevereſt fluxes, I endeavoured to prevent

vent the generation of morbid matter to be diſcharged by the inteſtines in the ſecond ſtage, by repreſſing the fever and inflammation by means of a cooling regimen, and as large and frequent veneſections as the patient's conſtitution would bear. As ſoon, therefore, as any one complained, unleſs the ſtate of his body abſolutely forbid it, more or leſs blood was taken away, according to the age, conſtitution, and other circumſtances of the patient. If the mouth only was yet inflamed, and the fauces not at all, or but ſlightly, a moderate doſe of ſal. cathart. amar. was given, either on the ſame day, or the next morning: but if it appeared by the ſtate of the throat, that probably the inflammation extended to the ſtomach, or farther, this was omitted; as I found that the mildeſt purga-

tive

tive could not be borne under that circumſtance in this ſtage of the diſeaſe, without danger of an hypercatharſis: an emollient clyſter was, however, commonly thrown up with advantage. The patient was not ſuffered to confine himſelf, but was ordered to keep conſtantly, by day, in the open air in the ſhade. Warm decoctions of emollient and pectoral herbs were uſed for common drink. If the ſtomach could bear it, ſmall quantities of nitre were given. Oily tinctures, or ſpermaceti emulſions were uſed plentifully, to mitigate the cough; and moderate doſes of tinct. thebaica were uſually given at night. The mouth and throat were gargled with ſome warm emollient decoction ſweetened with muſcovado ſugar; and the eyes were cooled by the frequent application of a weak ſolution

tion of white vitriol and ſacchar. ſaturni.

As the fever and inflammatory ſymptoms increaſed, the bleeding was repeated, and very frequently a ſecond time, about the ſtate of the fever, juſt before the deſquammation of the exanthemata began. But the moſt alarming of all the ſymptoms, and which demanded bleeding moſt, were the vomiting and purging, which ſometimes happened in this period. As this was chiefly a ſpaſmodic affection of the ſtomach and inteſtines, in conſequence of the inflammation, and attended with excruciating pain, after bleeding, recourſe was had to opium, and that in conſiderable quantities: two, three, or even four grains of opium were requiſite to be given to adults, in the courſe of every twenty-four hours. Beſides this, ſpermaceti, pulvis e tragacanth. comp. gum arabic,

bic, or the gum of the acajou tree, ſtarch gelly, and ſtarch clyſters with tinct. thebaica, and ſometimes teſtaceous powders, chalk or Armenian bole finely pulverized were abſolutely neceſſary to be freely uſed; and, by theſe means, it was generally pleaſing, to ſee with how much certainty and eaſe theſe ſymptoms were removed. At firſt I gave, in this caſe, a ſmall quantity of manna and ſal. cathart. amar. with a little ſweet oil, and a ſtronger opiate at night after it, than uſual; but the evacuation, which enſued, was commonly ſo violent, and ſunk the patient ſo low, that I found I was miſtaken in my idea of the indication, and ſoon deſiſted altogether from the uſe of a purgative.

In this ſtage I chiefly relied on veneſection, for relieving the cough: in ſome few caſes, that were more than

than uſually importunate, I applied bliſters to the thighs; but the uſe of theſe was commonly reſerved for the dyſenteric period.

II. When the diſeaſe was treated in this manner, after the exanthemata had continued out on the ſkin about four days, as I have already ſaid, they gradually diſappeared, leaving the ſurface of the body covered with furfuraceous ſcales; and the fever and inflammation of the eyes, mouth, and throat, ceaſed about the ſame time: the cough generally continued longer. And now either immediately, or ſometimes not till ſeveral days afterwards, the dyſenteric period commenced: not unfrequently the purging, which had begun in the febrile, was continued into, and formed the dyſenteric ſtage.

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IMMEDIATELY upon the complete receſſion of the exanthemata, and the appearance of the bran-like ſcales, if the inflammation of the mouth and fauces was quite gone, it was found expedient, whether the patient had or had not yet a flux, to give a gentle doſe of manna and ſal. cathart. amar. with the addition of ſome ſweet oil: but if the internal inflammation ſtill ſubſiſted, I thought it proper to defer the purgative for a day or two longer.

BLEEDING, if it had been duly adminiſtered in the former period, was not only unneceſſary now, but hurtful; as it evidently could not much leſſen the quantity of matter to be carried off by the alvine excretion; but would reduce the patient's ſtrength, already ſcarcely ſufficient to bear ſo profuſe a diſcharge. Bleeding was without doubt indiſpenſibly

requiſite in thoſe caſes, in which I mentioned my having ſeen the fever and internal inflammation increaſe, after the diſappearance of the eruption, through the want of it in the former part of the diſeaſe; but I had it not in my power to determine from my own experience, whether in caſes where the morbid matter is turned in upon the ſtomach and bowels, while the inflammation with which they were affected in the febrile period ſubſiſts, it be moſt expedient to adminiſter purgatives immediately, or to endeavour firſt to remove, or at leaſt to abate, the inflammation by repeated bleeding, opiates, and demulcents; though I am inclined to believe the latter. The caſes of this kind which occurred were but few, they ſoon proved fatal, but did not happen in my own practice.

At night, after the operation of the cathartic, an opiate was always given. But although the purge generally mitigated the ſeverity of the flux, if already began, or rendered that ſubſequent to it more mild than it would otherwiſe have been, yet it was never able to carry off the former, nor often to prevent the latter: often indeed, the ſtools continued from this time to increaſe in number notwithſtanding the opiate given at night, and the dyſentery began from thence.

If the cough remained after the purge had been adminiſtered, as was moſt frequently the caſe, bliſters applied to the thighs very ſeldom failed to remove that ſymptom intirely.

Let us ſuppoſe the dyſentery to be now begun, with ſevere gripes, and blood and mucus in the ſtools,

and the patient to have taken one doſe of the oily purge. Here it was proper to have recourſe to the ſame method which I propoſed in the flux of the febrile period: the ſame mucilaginous, demulcent, and abſorbent medicines were neceſſary to defend the ſtomach and guts from the acrimony of the morbid matter; and opiates were requiſite, not only to prevent the evacuation from exhauſting too much the ſtrength, and throwing the patient into a deliquium, but likewiſe, to quiet the painful ſpaſms, to moderate the inflammatory diſpoſition, and to impede the acceſſion of its more direful effects. Nor was any danger to be apprehended from the acrid matter being pent up within the body, by the uſe of opiates, as two, three, or four grains of opium taken by an adult, in the ſpace of twenty-four hours,

hours, were in general, at this time of the diſeaſe, but barely able to reſtrain the flux within ſuch bounds as not ſoon to exhauſt the patient*.

The manner in which the blood appeared in the ſtools, together with the teneſmus, indicating a violent irritation of the rectum by the ſharp humours which flowed through it, I ordered a ſtarch clyſter with the addition of ſome tinct. thebaica to be injected daily twice; which not only gave eaſe, and prevented the ulceration of that gut, but greatly diminiſhed, and, in time, intirely

* This free uſe of opium, at this time, may appear reprehenſible; but the frequent fainting fits, and ſometimes even ſudden death (one inſtance of which occurred in my own practice, and I have known of others), which happened from the prodigious diſcharge by ſtool, were no otherwiſe to be prevented, and the ſucceſs juſtified the uſe of the medicine.

ſtopped, the excretion of mucus. From this circumſtance it likewiſe appeared, that the ſource of the mucus was commonly no higher than the great inteſtines, and moſt frequently perhaps in the rectum and inferior part of the colon; in which opinion I was confirmed, by obſerving that, towards the decline of the flux, ſome perſons had three or four ſtercoraceous ſtools in a day, of a tolerable conſiſtence, but between them a frequent excretion of mucus, without the leaſt admixture of fæces.

If the patient had no flux, a repetition of the purgative, about four days after the firſt doſe, commonly finiſhed his cure; but if he had the flux, it was ſtill more neceſſary, and after it, the ſame medicines were to be uſed as before; with a further repetition of the oily purge, if feveriſhneſs,

neſs, ſlight nauſea, tenſion of the belly, return, or increaſe of the griping pains, required it.

As ſoon as by the uſe of the oily purges, opiates, and demulcent medicines, the painfulneſs of the abdomen and gripes were either wholly, or nearly gone, and the ſtools however liquid, became ſtercoraceous, it was then time to endeavour to divert the humours from flowing inwards, by increaſing the diſcharge by the cutaneous emunctory; to reſtrain the rapidity with which the periſtaltic motion precipitated the contents of the inteſtines towards the anus, by obliterating the impreſſion of the morbid ſtimuli by means of paregorics, and introducing others of a different nature; and to reſtore the tone of the bowels by medicines of the warm and bracing kind. Theſe ſeveral indications I found to

be very ſucceſsfully anſwered by continuing the uſe of the opium as before; by giving half a drachm of theriac, androm or mithridate, two grains of rhubarb, and from five to ten grains of toaſted nutmeg, or a drop or two of its eſſential oil, or one of that of cinnamon, three or four times a day; and directing a decoction of logwood, or of the bark of the guava tree with ſome warm aromatic, to be uſed for common drink. If the ſmall quantity of rhubarb, in the medicine juſt deſcribed, after being taken for a few days, ſeemed to purge the patient, it was beſt to omit it for two days, and then to add it again for about three days, alternately.

About the decline of the flux it generally happened, after the ſtools had decreaſed in number, and grown of a better conſiſtence for ſome time, that the belly became tenſe and painful, and ſhortly after a

pretty ſevere purging ſucceeded for two or three days, when the frequency of the ſtools gradually diminiſhed, and at length the belly became again tenſe and painful. This painful tenſion of the belly and purging continued to return alternately, for ſome time, and now and then proved very troubleſome. As ſoon, and as often as this tenſion and painfulneſs appeared, it was found expedient, to give a ſmall doſe of manna, or, what I thought better, of rhubarb, which could not be uſed in the earlier part of the flux without occaſioning moſt ſevere gripes, and increaſing the diſcharge of blood. After the operation of the rhubarb or manna, as often as it was requiſite to have recourſe to them, the uſe of the medicines juſt now recommended, was to be reſumed; and in this manner to be continued, until the inteſtines

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and their functions were reſtored to their natural ſtate *. By theſe means moſt of the ſick eſcaped; ſome recovering very ſoon, and without any difficulty, others only by degrees, after the flux had run on for ſeveral weeks.

Not a little care was requiſite, to prevent a relapſe; which happened very eaſily from irregularities, or catching cold. I have likewiſe known a flux come on from getting wet in a ſhower of rain, near a month after the diſappearance of the meaſles, when only a very trifling purging had ſucceeded the receſſion of the exanthemata.

Not unfrequently it happened pretty early in this ſecond pe-

* The rhubarb was always left out of the medicine for a day or two after the purge had been taken; ſome people were now and then affected in the manner I have juſt mentioned, after they had altogether ceaſed to take medicines.

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riod of the diſeaſe, if there was but little or no purging, or, if the flux was more profuſe, towards its decline, or after its total ceſſation, that many were affected with loſs of appetite, nauſea, and ſometimes with puking. In this caſe a vomit, and after it a doſe of rhubarb, were giv̄en; which always removed theſe ſymptoms for the preſent, but, as they were very apt to return, it was generally neceſſary to repeat theſe evacuations, after a ſhort interval of time.

As, after thoſe violent affections of the ſtomach and bowels, theſe viſcera frequently contracted a great debility, which produced loſs of appetite, indigeſtion, and flatulency, the uſe of bitter and aromatic infuſions was found of great advantage.

When the violence of the gripes and teneſmus brought on a diſcharge of blood from the uterus in pregnant

nant women, after bleeding, if the patient appeared capable of bearing that evacuation, it was of ſervice to remove, as much as poſſible, the irritating cauſe by a gentle doſe of manna and ſweet oil; to calm the ſpaſms with large and frequent doſes of opium, and to defend the rectum from the ſharp humours, and render it leſs ſenſible of their acrimony by ſtarch clyſters with tinct. thebaica. But, notwithſtanding all my endeavours, abortion ſometimes happened: this likewiſe ſometimes came on ſuddenly, and without any previous hæmorrhage. If after the dyſentery had ceaſed, a draining of blood from the pudenda continued obſtinate, or after having once or oftener ſtopped, returned without abortion, and opiates, Peruvian bark, and elixir of vitriol, had failed, I have ſometimes given with ſucceſs, three or four times a day,

a ſpoonful

a ſpoonful or two of a watery tincture, made with half a drachm of calcined vitriol and a handful of ſome aſtringent bark infuſed in a quart of cold water. This medicine I have likewiſe uſed with great advantage in other uterine floodings*.

DURING

* SINCE that time, I have uſed the following medicine, which I think more efficacious, indeed the moſt to be depended on of any that I know in hæmorrhages, in which aſtringents are proper. ℞. Cort. Peruv. pulv. ℥i. Aquæ ℔iv. coque ad partem dimidiam, tum adjice vitrioli calcinat. ʒ ß. et ab igne anferatur decoctum, cumque penitus refrixerit coletur. A ſpoonful of this medicine, added to four ſpoonfuls of a decoction of bark, or diluted with as much cold water, I have uſually given three or four times a day; and, to prevent its being decompoſed in the ſtomach and inteſtines, have ſometimes added a few drops of elixir vitrioli acidi to each doſe. A lady of a very lax habit of body, who had been married about twenty months, had miſcarried twice within that time. About a fortnight after her laſt miſcarriage, which happened when ſhe was from home, on a viſit, ſhe rode about ſixteen miles to her own houſe. On the next day ſhe was ſeized with a violent pain and tenſion of the hypogaſtrium, and excruciating pains of her bowels.

During the dyſenteric, contrary to what I had done in the preceding

bowels. By the help of emollient clyſters and and fomentations, and gentle diaphoretic and anodyne medicines, ſome fætid grumes of blood came away from the uterus, and a moderate diſcharge ſucceeding, ſhe was, within a few days, to all appearances perfectly well. About five weeks afterwards ſhe informed me, that the diſcharge had never intirely ceaſed after her late illneſs, and was now ſo much increaſed, that ſhe was reduced, by the hæmorrhage, to a ſtate of great debility. As the diſeaſe ſeemed to proceed from weakneſs and laxity, I adviſed her to uſe the decoction of bark with elixir of vitriol. The bark, when ſhe began to take it, having a tendency to run off by ſtool, I ſubſtituted a few drops of tinct. thebaica in the place of the elixir of vitriol; the conſequence of which was a great increaſe of the hæmorrhage. Other methods being taken to prevent a diarrhœa, the decoction of bark and the elixir of vitriol were continued for ſeveral days, without the leaſt benefit. I then had recourſe to the medicine before deſcribed; which being added to the decoction of bark, in the manner already mentioned, almoſt immediately produced a conſiderable alteration, and ſoon intirely ſtopped the hæmorrhage. Its uſe was however ſtill continued for ſome time afterwards, with the addition of a few drops of elixir vitrioli acidi to each doſe, and reſtored the patient to a ſtate of good health ſhe had not often experienced before.

period, I directed the body to be kept warm, eſpecially at night, with a view of promoting the diſcharge of the vitiated humours by perſpiration, and of preventing their being turned in ſo impetuouſly upon the inteſtines. The food, both in this and the febrile ſtage, was of the ſlighteſt and blandeſt kind that could be afforded, ſuch as flour pap, boiled rice, and freſh-meat broths.

It may perhaps be a circumſtance worth noticing relative to this flux, that, when a great number were ſick together, it not being unuſual for fifty or ſixty negroes belonging to the ſame eſtate, to have the diſeaſe at the ſame time, it was always ſevereſt; and I have then obſerved the nurſes, and even felt myſelf to be affected, in ſome degree, with the ſame diſorder. As I attributed this to the effluvia of their excrements, I ordered

dered holes to be digged every morning for the ſick to eaſe themſelves into, and to be cloſed again next day; but ſuch was their perverſeneſs, that they could not be prevailed on to make uſe of this convenience.

The appearance of a ſingle febrile paroxiſm, without any other remarkable ſymptom, in the ſecond ſtage of the diſeaſe, required no particular regard; but if the attacks were repeated, as was not unfrequently the caſe, though I never obſerved it either in the beginning of the flux, or while as it was very ſevere, it was neceſſary, to have recourſe to the bark.

If the diſeaſe was treated in the manner I have related, notwithſtanding the violence of many of its ſymptoms, it was far from being fatal; the numbers of thoſe that died,

died, according to the beſt calculation I could make, not amounting to more than one out of eighty.

I have already obſerved, that moſt people were particularly ſubject to inflammatory complaints after the meaſles: the other morbid affections, which occurred in conſequence of them, were not many. The moſt remarkable were

I. A tetanus and locked jaw in a girl about eleven years old, from catching cold in a rainy day. She perfectly recovered in the ſpace of a month, by means of opiates: the greateſt quantity ſhe took, was twenty drops of tinct. thebaica every two hours.

II. A woman about forty, and a boy about ſeventeen years old, after ſevere fluxes, grew anaſarcous: the boy had been affected with the ſame

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diſorder more than once before. The woman died about three months after the meaſles; but the boy recovered, notwithſtanding the ſcarifications of his ſcrotum had mortified, and thoſe on his legs had been kept with difficulty from being affected in the ſame manner. They both took the cortex Peruv. and chalybeate preparations, and were ſupported with the moſt generous food that could be afforded them.

III. A ſucking child, of the age of eighteen months, had a ſlight dry cough after the meaſles; to this acceded a periodical fever with quotidian paroxiſms. All my endeavours could not perfectly remove the cough, which, if at any time a little better, ſhortly reſumed its former violence. The fever likewiſe, although it ſometimes ceaſed for a week, at other times longer, yet con-

conſtantly returned again. The lungs were evidently much obſtructed, but did not ſeem to be ſuppurated; the fever was alſo more inflammatory, and had ſeverer paroxyſms than is uſual in the purulent kind. The child lingered in this manner for about ſix months, and then died tabid. I have obſerved the ſame kind of fever and cough at other times, from obſtructed and inflamed lungs, in this country *.

To

* In this country, where hardly any fevers occur but of the intermittent kind, and thoſe with every variety of type, and irregularity of paroxyſm, and accompanied frequently with divers adventitious ſymptoms, and, amongſt others, with affections of the lungs, it is perhaps impoſſible to diſcover immediately this hectic fever; which will therefore, moſt probable be treated at firſt, whenever it happens, as one of the intermittent kind with a cough. With reſpect to the neceſſity of bleeding no one can be miſtaken, but the bark will be readily given, which always increaſes the cough and difficulty of breathing, and frequently changes the intermittent

To theſe remarks it may not be amiſs to add, that, during the courſe

into a continual fever. The blood in this diſeaſe, in whatever quantities, and however often it be drawn, has, to the very laſt, more of the tenacious inflammatory ſize than, I think, I have ſeen at any other time. As far as I have obſerved, relief is only to be expected from frequent bleedings, the antiphlogiſtic neutral ſalts, dilution, and a low diet: the bark is certainly noxious. Herein this diſorder differs from the moſt inflammatory pleuriſies and peripneumonies in this country; which, if veneſection be very liberally uſed at the ſame time, bear the bark well. Indeed the free and early uſe of this medicine is as neceſſary, in the diſeaſes here as in the veternous fevers in Italy, and ſome other ſouthern countries of Europe; for, as the fever, which attends theſe local inflammations, is always, unleſs by accident, of the intermittent kind, if the greateſt remiſſion of the ſymptoms, that can be wiſhed for, be obtained at the end of a paroxyſm, the next return of the fever will almoſt always, if the caſe be in the leaſt degree ſevere, bring every thing back into the ſame, and frequently a much worſe ſtate than before. Next to the lancet, therefore, the ſaving life depends on making the patient ſwallow, in the intermiſſion, as much bark as his ſtomach can bear; that if poſſible, a return of the fever may be prevented, or at leaſt the ſeverity of the next greatly mitigated.

of

of the epidemic, the weather was extremely dry and fair; but about the end of April ſome rain fell, and in the beginning of May the wet ſeaſon ſet in, which ſo intirely put a ſtop to the diſeaſe, that I ſaw only one boy ſeized with it after the rains began.

LETTER VI.

Account of the Bilious Cholic, called the Dry Belly-ache.

Dear Sir,

JAMAICA,
March 23, 1773.

AS you desire me to communicate to you what observations I have made on the diseases of this island, particularly on those incident to warm climates, I shall, as far as may be in my power, embrace every opportunity of giving you such information as I think may be worth your notice.

WITH

WITH reſpect to the endemial diſorders of warm countries, as thoſe which ariſe from, or are accompanied with putrefaction, are ſo commonly looked upon to hold the firſt place amongſt them, you will perhaps be ſurpriſed when I tell you that, in almoſt ſix years practice, in this country, I have not, to the beſt of my remembrance, met with a ſingle caſe of what might properly be called an acute putrid diſeaſe, except the ſmall-pox. Many, indeed, and various are the morbid effects of the febrile, delirious, and ſpaſmodic kinds, which proceed from corrupt bile; and in thoſe caſes the ſtools are ſometimes highly offenſive; but I never diſcovered any degree of real putrefaction, except where it is, more or leſs, to be found even in health.

AMONGST the ſpaſmodic effects of corrupt bile may moſt commonly be

reckoned that ſpecies of cholic, called here the dry belly-ache, and which agrees in general with the colica pictonum. In the ſecond volume of the Medical Tranſactions I find a paper of the ingenious Dr. Baker, on the poiſon of lead, from which he endeavours to prove, that this endemial diſeaſe of the Weſt Indies proceeds. The Doctors information concerning the quantity of lead, in the apparatus for making ſugar and rum, is in general very juſt; but the obſervation, that the ſervants are particularly obnoxious to this diſeaſe not appearing to me to be equally ſo, I made inquiry on that ſubject amongſt ſome of the oldeſt and moſt experienced inhabitants in this country, and found that, formerly it was commonly remarked to be the caſe, but was attributed to thoſe people expoſing themſelves, when intoxicated, to every inclemency of

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the climate. I take no pleaſure in controverting the doctrine of a gentleman, whoſe name I reſpect and whoſe reſearches I applaud; and I hope, I ſhall be allowed to plead the circumſtances of my ſituation, and the love of truth, in my excuſe, for offering a few conſiderations on this ſubject, as well as on what appears to me to be the true cauſe of this diſeaſe.

The notion that the acid juices of limes and lemons give riſe to this diſorder, if it ever was, is not now, I believe, maintained by any perſon in this country; and experience ſeems to ſhew, that the poiſon of lead contributes as little to it: for,

I. Whatever might be the caſe many years ſince, it is not now true, that the inferior claſs of people are more ſubject to this diſeaſe than others. Of all the diſtillers (who are almoſt univerſally a drunken ſet

of

of people, and from the abuſe of new rum appear frequently like ghoſts)—of the great number of miſerable vagabonds (who ſtroll about this iſland, and live in a conſtant ſtate of intoxication with the ſame liquor)—of all the inferior white ſervants (of whatever denomination, who drink no other kind of rum) whom I have ſeen, I have never yet known more than one affected with this diſeaſe, or any of its conſequences. It is likewiſe to be remarked, that the negroes employed in a ſtill-houſe are commonly the fatteſt on the plantation, and that placing them there is an approved method of recruiting emaciated ſlaves; and alſo that negroes in general uſe great quantities of the neweſt and vileſt rum, and filthieſt ſugar; yet I never ſaw or heard of one of thoſe people being attacked with this diſorder.

II.

II. Except in the ſingle perſon juſt mentioned, every caſe of this cholic, which I have yet met with, has occurred in people of the better ſort, who were temperate, and, when they drank rum, uſed ſuch as was greatly ſuperior both in age and quality, to what is eaſily to be got in Europe. Moreover, the ladies, though perhaps they yield, in point of abſtemiouſneſs, to hardly any people in the world, and drink little elſe but water, are ſcarcely more exempt from the attacks of this excruciating diſorder, than the other ſex.

III. The rum, which is exported to Europe, is generally but a few weeks old, and frequently is ſent off juſt freſh from the ſtill; hardly any, if it can be avoided, is kept at the end of the crop, but what is requiſite for the conſumption on the eſtate; of which that intended for the uſe of the overſeer's houſe, is often

often made with peculiar care, and, as well as what is drank in almoſt all families, is reſerved to a proper age; whilſt it is ſcarcely to be doubted, that the greateſt part of the inferior exported rum is conſumed within no very conſiderable time after its arrival in Europe, not at all improved by the arts of the dealers in that commodity. To this add likewiſe the great conſumption of Muſcovado ſugar in England; which can hardly fail to be as much infected with the ſaturnine poiſon as rum; ſince the whole maſs of brick-work, in which the boilers are fixed, being covered with lead, which likewiſe is folded down into, and forms the upper part of thoſe veſſels, a very large ſurface of that metal is perpetually flowed over, and waſhed by the cane liquor, during the whole time of decoction. For theſe reaſons it might juſtly be expected, upon the Doctor's

prin-

principles, that this ſpecies of cholic ſhould be fully as endemial in England as in this part of the world.

IV. ANOTHER, and very different cauſe of this diſeaſe, ſo obviouſly preſents itſelf to our notice, as to leave not the leaſt doubt that it really produces it. The cauſe I mean is corrupt bile; and although in people, who have had long and frequent attacks of the belly-ache, and perhaps been injudiciouſly treated, the bowels, like thoſe of an hyſteric woman, may have ſometimes acquired ſuch a diſpoſition to be ſpaſmodically affected, that a ſlight cold, or a very trifling irregularity, will occaſion an attack of the diſorder, without any bilious ſymptoms, yet its firſt riſe may invariably be deduced from the cauſe I have mentioned. This will fully appear from what I have further to ſay.

V.

V. As its exciting cauſe is different, ſo likewiſe is the diſeaſe itſelf conſiderably from the ſaturnine cholic. For, firſt, the dry belly-ache is frequently not a primary diſeaſe. It is a notion almoſt univerſally received amongſt the inhabitants of this iſland, that the Peruvian bark occaſions this diſorder; and I find, that it frequently does appear, in conſequence of the uſe of that medicine, often through imprudence, but ſometimes in ſpite of the utmoſt caution.

Fevers in this country are almoſt always attended, in white people, with more or leſs diſorder of the firſt paſſages, eſpecially in the latter part of the year. Many people throw up, by vomiting, enormous quantities of bile; and though others may not be affected with vomiting, nor even complain of nauſea, yet the event ſhews them to be no leſs loaded

with

with that fluid. I have known, in a caſe of this kind, half an ounce of cathartic ſalt purge an adult more than thirty times in a few hours.

All, who have been converſant in treating bilious fevers, muſt have obſerved, that it is only under certain circumſtances, that emetics will relieve the patient, by properly evacuating the offending bile. In the fevers, of which I ſpeak, however copiouſly and effectually bile may have been diſcharged, upwards and downwards, either by natural or artificial evacuations, yet the relief will frequently be but temporary; the ſecretion going on with ſuch rapidity, that the ſtomach and bowels will, in a very ſhort time, be oppreſſed with an equal quantity as before. Sometimes, though not very often, theſe fevers are merely depuratory, and terminate in a cholera; but, even here, very commonly, the relief

relief is only of a ſomewhat longer duration; and the fever returns again, after a few weeks, attended with the ſame ſymptoms, and terminating in the ſame manner, as before; or perhaps a cholera, without any previous notice, comes on, and this repeatedly.

As theſe fevers are all, unleſs by accident, of the intermittent kind, the greateſt part of them require the bark, and are not to be cured without it; but if that medicine be given, before the bilious affection of the firſt paſſages is well removed, the conſequence will moſt commonly be an attack of the endemial cholic. Although, as I have already ſaid, this moſt frequently happens through imprudence, yet it is not always poſſible to prevent it. A few weeks ſince an elderly gentleman was ſeiſed with a fever; his ſtomach was rather more affected than it had uſually

been in any former fever; but he had no vomiting. From a loſs of appetite, feveriſh heat, and green bilious ſtools, which had for ſome time preceded this fever, I was induced to pay a particular regard to the firſt paſſages; which, as I thought, were ſufficiently cleanſed before he began to take the bark; with which I joined the ſaline mixture with the rhubarb, and by that means procured about three ſtools daily. The fever returned but once, and that ſlightly, after he began to uſe the bark; but within a few days was ſucceeded by the dry belly-ache.

This diſeaſe does not, however, always happen in this manner: it comes on likewiſe after fevers, in which the bilious colluvies has not been duly evacuated, although no bark has been given; and alſo after ſuch as have had no medical treatment whatever. A young man,

about twenty-four years old, was taken with a vomiting and purging, to which acceded a fever that continued for three days, and then ceaſed, as did likewiſe the vomiting and purging a few days afterwards. From this time he complained of great proſtration of ſtrength, dejection of mind, loſs of appetite, and want of ſleep. His tongue was foul, dry, and of a brown colour. He had conſtant tremors, and ſlight convulſive twitchings of his muſcles. His pulſe was good, and he had no nauſea, or uneaſineſs in his bowels. In this ſtate he rode about twenty miles to put himſelf under my care. It was three days before he was able to accompliſh this journey, in the ſecond night of which he was highly delirious. About ſix o'clock in the morning of the day, after he had got to the place of his deſtination, I was called to him. I found him inſenſible;

ſenſible; his eyes open and fixed, and their pupils greatly dilated; the corner of his mouth drawn towards his right ear by the ſpaſmus cynicus, and the muſcles of his arms often convulſed, with ſubſultus tendinum, and twitchings of his fingers. Some liquid being attempted to be put down his throat, he threw up twice ſome extremely viſcid atrabilious matter. About eight o'clock he was ſeized with violent epileptic fits. During the convulſions his head was drawn backwards, and the pupils of his eyes were dilated; but, as ſoon as they remitted, the pupils contracted themſelves again. The vehemence of the convulſions abated after ſomewhat more than an hour; but he continued to toſs himſelf greatly, and preſſed his hands on the ſides of his belly as if in pain there. His anus was violently contracted; and his pharynx ſo convulſed, that

nothing could paſs down his throat. About noon the rhonchus came on, from much viſcid phlegm in his throat; ſo that great diligence was neceſſary to enable him to breathe. Not long after a ſtrong fluctuation was both heard, and felt with the hand, in his ſtomach; and ſeemed to proceed from a ſtrong convulſive motion of that viſcus endeavouring to diſcharge its contents, whilſt both its orifices were contracted by an inſuperable ſpaſm. Between four and five o'clock in the afternoon he died. Soon after his death, I ſuppoſe from the ſpaſms being relaxed, a great quantity of atrabilious ſtools came away; and, during the ſucceeding night, a prodigious deal of the ſame kind of matter diſcharged itſelf from his mouth.

Although this caſe, properly ſpeaking, was not the dry belly-ache, yet it ſeemed to differ from it chiefly in

in degree, but not at all with reſpect to its cauſe; my idea of which it will ſerve to illuſtrate. I have ſeen ſeveral caſes of fevers attended with great proſtration of ſtrength, dejection of mind, low delirium, tremors, ſubſultus tendinum, and other convulſive twitchings of the muſcles; all which ſymptoms I have never hitherto failed to remove, by cautiouſly and prudently evacuating the noxious ſaburra in the firſt paſſages*.

Most

* But it is to be obſerved, that the circumſtances of theſe caſes plainly indicated the cauſe of theſe ſymptoms.

Bile, even when it deviates no otherwiſe from a natural ſtate, as far as can be diſcovered, than in its abundant quantity, produces many anomalous ſymptoms, through the conſent of the other parts of the body with the ſtomach and bowels. In Auguſt 1771, as I was ill of a ſemitertian fever, in one of the paroxyſms, I felt a very extraordinary ſenſation, as if I was falling into a ſyncope, particularly if I lay on my left ſide. At this time I had not the leaſt nauſea, or ſuſpicion of

Most of the cases of the dry belly-ache that have occurred in my practice,

bile in my stomach. As through the whole day I had taken nothing but cold water, and the juices of the fruits of the country, I imagined that this great lowness proceeded from inanition: I therefore ordered a spoonful of Madeira wine, diluted with a little barley water, to be given me. This was not drank many minutes before I vomited up about a pint of yellow bile and juices of the stomach mixed; and from this time the faintness left me. Not long after I was recovered of this fever, I felt, every now and then, a strong convulsive systole of my heart, which smote my breast with great violence, and my pulse intermitted for the time of a beat or two after it. This symptom grew by degrees more frequent, and in about three days became an almost continual palpitation of my heart; when suddenly a very severe cholera came on, and rid me, for that time, of this troublesome complaint; which however returned again twice that autumn, and was, as often succeeded by a cholera.

The two following cases will not perhaps be impertinent to this subject.

I. A middle aged negroe man, after complaining for some days of a pain in his loins, and excessive costiveness, and taking some laxative medicines without any effect, was suddenly deprived of his speech, and external senses. When I first saw him, which was early in the morning, he

was

practice, have been of this ſecondary kind. I have, however, ſeen it, when it

was ſtalking about a field naked, and ſtumbling over every thing that lay in his way. Nothing but force could keep him ſtill, or in one place. His eyes were fixed, and ſtaring, and remained unmoved, whatever objects were preſented to them. The man appeared inſenſible of every thing that was ſaid or done to him; and pain could not extort a word from him. Upon inquiry I found that he had long had a flux, which had but lately ſtopped, and had been ſucceeded by an obſtinate coſtiveneſs. Upon this I ordered for him an emetic, which having no effect, more of the ſame was then given, but to as little purpoſe as that taken before. As I now ſaw that nothing was to be done by moderate means, I directed thirty grains of white vitriol diſſolved in water to be put down his throat. After waiting ſome time, and finding that even this did not excite vomiting, as I did not doubt that what had been taken would ſoon operate downwards, I ordered warm water and ſweet oil to be given him often. After a few hours a plentiful diſcharge of moſt offenſive liquid fæces came on; and the man recovered his ſenſes that ſame evening, and his ſpeech on the next day. The purging however continued from this time; under which, in ſpite of every endeavour to ſave him, he ſunk gradually ſome weeks afterwards.

it has not been preceded by any other diſeaſe; but its cauſe was not the

II. A young man, but lately come from Scotland, was, ſoon after his arrival here, ſeized with a ſevere fever, attended with bilious ſymptoms, and likewiſe delirium, tremors, and ſubſultus tendinum. Of this diſeaſe he perfectly recovered. Some months afterwards, on riding to another part of the country, he was caught in a heavy rain, and, within a few days, he loſt the uſe of his lower extremities, and, in a great meaſure, that of his arms and tongue. In this condition he was brought to the houſe of a relation of his, near where I live. At that time I being ill of a fever, he was viſited by a neighbouring ſurgeon, whoſe patient he had been in his former illneſs, who ordered for him a nervous medicine, and directed the ſpine of his back, and both upper and lower extremities, to be embrocated with petroleum diluted with rum. When I ſaw him after my recovery, I found, upon examination, his lower extremities totally, but his arms and hands only in ſome degree deprived of motion; his tongue was alſo ſo far affected, that he could hardly articulate his words ſo as to be underſtood; his reaſon too ſeemed to be greatly impaired, on which account, he was miſtaken by ſeveral people, at firſt ſight, for a perſon in liquor. I obſerved likewiſe, that he had ſo voracious an appetite, that he ſometimes eat till he diſgorged again the contents of his ſtomach: he would alſo,

the leſs evidently corrupted bile. The only caſe of an inferior white man, that

alſo, unleſs he had before him the proſpect of eating, reſiſt with all his power, if an attempt was made to take him off his bed, where he lay ſleeping almoſt the whole day as well as night. Upon conſidering the circumſtances of this caſe, I had not the leaſt doubt, that the ſame cauſe, which excited that preternatural ſenſe of hunger, was likewiſe the occaſion, by means of nervous ſympathy, of the paralytic affection, ideocy, and inclination to ſleep. Upon explaining my ſentiments to the gentleman, under whoſe care the patient had been before, they were intirely aſſented to; and we agreed to give him an emetic, and afterwards to procure two or three ſtools daily, by means of the gums quickened with aloes. The vomit operated pretty ſmartly; by which evacuation, and the uſe of the opening pills, his appetite and intellects were reſtored to their natural ſtate. He was then put upon a courſe of medicines, of the ſtimulating, invigorating, and corroborating kind; and a light and eaſily digeſtible diet. Frictions alſo, and the embrocation above mentioned, were diligently uſed. As by theſe means he obtained a little motion of his legs, and exerciſe, if it could any how be uſed, appeared highly expedient, he was ſupported under his arms by the ſhoulders of two ſtout negroes, and led forwards and backwards in a long piazza. In a little time he was able to move his

legs,

that I have yet met with, which I before hinted at, was of this ſort. This man was taken ill towards the cloſe of the laſt year; which, from the month of April to near its end, was uncommonly wet.

FROM July to almoſt this preſent time, vomitings, diarrhœas and dyſenteries, ſpaſmodic pains of the ſtomach and bowels, ſpaſmodic pleuritic pains by conſent with the primæ viæ, and fevers accompanied by, or terminating in, vomiting and purging, were epidemical. More inſtances likewiſe of the endemial cholic occurred during this period, than I ever met with before in an equal ſpace of time.

legs indifferently well, when ſupported in this manner; but could not ſtand alone. He was then put on horſeback, with a negro ſitting behind him, and another leading the horſe. At length he was able to ride without any perſon's aſſiſtance; and, at the end of about ten weeks, was perfectly recovered of every ſymptom of the diſorder, except a ſlight tremor of his hands.

CLEAN-

CLEANSING the firſt paſſages was the general cure of all theſe diſorders, which ceaſed readily, as ſoon as the cauſe, evidently ſeated there, was removed. In this man's caſe, as ſoon as the ſpaſms were allayed by the uſe of opium and antiſpaſmodics, he began to gulp up inceſſantly a great deal of æruginous bile: upon which, as it could now be done with ſafety, I gave him ſmall, but repeated, doſes of emetic tartar; which brought up a prodigious quantity of the ſame kind of matter. From this time his relief was permanent, and very little opium was required to keep him eaſy. His ſtools before, and ſome few of them after taking the vomit, were of a deep green colour; but an oily laxative medicine ſoon carried off the remainder of the noxious contents of the bowels; and within a few days no ſymptoms of the diſeaſe remained.

SECONDLY,

Secondly, it does not appear to me, that the ſymptoms of the endemial cholic, of this part of the world, are altogether the ſame with thoſe of the ſaturnine. I have ſeveral times treated this latter diſorder with ſucceſs in Europe, and know, that vomiting is common in it; but then it is merely a ſpaſmodic ſymptom, ſolely an effect of the diſeaſe, and never affords relief, or happens when the patient is eaſy. The ſame ſymptom occurs likewiſe in our cholic, in the vehemence of the diſorder, before the ſpaſms are allayed; but it is to be obſerved, that, in the diſeaſe of this climate, after the patient is made eaſy, and the laxative medicines begin to operate, a copious diſcharge ſometimes comes on, both upwards and downwards, in the manner of a cholera; and from this time the patient, who had before had only temporary eaſe, finds

it

it become permanent, and the diſeaſe declines apace. The matter evacuated, as well by vomiting as by ſtool, is, in different caſes, of different colours, from the brighteſt green to a greeniſh black; and the ſtools are ſometimes ſo horribly offenſive, as to render it ſcarce poſſible to ſtay in the ſick perſon's room.

MOREOVER, coſtiveneſs is not an abſolutely conſtant and neceſſary ſymptom of this ſpecies of cholic. In the two laſt caſes which I met with, both patients were moderately lax, even when in extreme pain; neither was there any difficulty in increaſing the number of their ſtools; and theſe I obſerved, in one of them, to give more relief by evacuating the cauſe of the diſeaſe, than opium or antiſpaſmodics alone; and however uſeful the latter were to obtain eaſe, yet that eaſe became greater and more permanent, as the operation

tion of the laxative medicines proceeded; and if that operation ceased but for a few hours only, it was but barely possible, by any other means, to keep the pain within moderate bounds.

In other respects the West India cholic agrees nearly with the saturnine; except that it seldom is so obstinate, or its symptoms so violent.

Dr. H. Warren gave a short, but extremely just, and useful hint, relative to the cure of the dry belly-ache, in his *Treatise on the Yellow Fever*. What has occurred to me I will now submit to your consideration.

In those cases which I have already mentioned as being merely convulsive, opium and antispasmodics are almost all that is requisite; at most only a few small doses of some very lenient cathartic are necessary, after perfect ease is procured, just

to open the body. In the more uſual courſe of the diſeaſe the ſick do not eſcape with ſo little difficulty. But here likewiſe the firſt indication is, to remove the pain. This does not appear to me to be capable of being ſo perfectly accompliſhed ſolely by narcotics, in our cholic, as in the ſaturnine; for, as the former is evidently a diſeaſe cum materia, (much more ſo than the latter) the caſe obtained can only be in proportion to the degree of inſenſibility of the morbific cauſe, which the opium produces in the ſtomach and bowels, and will remain no longer than the opium continues to act; it is therefore in general in vain to wait for a perfect and conſtant relief before ſtools are attempted to be procured. Opium, in many people, is ſufficient of itſelf to quell the painful ſpaſms; in others, it ſucceeds beſt when joined with antiſpaſmodics; but

but is always moſt effectual when given in a clyſter of warm oil. According to the different circumſtances of the caſe, I give from half a grain to two grains of opium every two hours; and a clyſter of warm oil with tinct. thebaica I order to be injected once, and ſometimes twice a day. Of antiſpaſmodics, muſk appears to me to be the moſt generally uſeful; but with ſome perſons it agrees beſt when mixed with a little aſafœtida. Chance threw it once in my way to obſerve, that ſometimes, when other medicines fail, the warmer ſtimulants, ſuch as philonium and the eſſential oils, may be given with ſafety and great advantage; perhaps by introducing a ſtimulus of a different kind, or more powerful nature, than that of the irritating cauſe in the ſtomach and inteſtines. At all times great benefit will be found from inveloping, and diluting

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the acrid bile with oily or ſperma-ceti emulſions, mucilaginous medi-cines, gelatinous broths, ſago, &c. If a puking be urgent, a draught or two of warm camomile tea will give temporary relief, by bringing up ſome of the contents of the ſtomach. The warm bath, fomentations, bags of hot ſalt, bladders of warm water, and even hot bricks wrapped in cloths, applied to the abdomen, are all of conſiderable ſervice.

As ſoon as the ſpaſms are allayed, and as great a degree of eaſe is ob-tained, as appears poſſible (ſo long as the irritating cauſe remains within the body,) I uſually endeavour to procure ſtools by means of ſome very gentle cathartic: that, which I judge to be preferable to any other, is an oily purging medicine compoſed of ſal cathart. amar. manna and ol. amygdalar. or olivar. made with the yolk of an egg into the form of an

emulſion. This, given in ſmall doſes and often, ſits eaſy on the ſtomach, and will very ſeldom fail to procure ſtools without increaſing the pain. The oleum ricini does not ſeem to me to deſerve the immoderate praiſes that have been beſtowed on it. There are but few ſtomachs that can bear it; and, beſides its nauſiouſneſs, even when cold drawn, it has the diſadvantage of being a ſlow, griping purge, and occaſions a teneſmus, with a ſenſation as if the whole contents of the abdomen were coming out together. It is likewiſe to be obſerved, that it will not keep long; and, if it be not freſh, it is a dangerous medicine; as it ſoon contracts an acrimony, which one, that has not taſted, can hardly conceive. Not long ſince a friend of mine was thrown into a ſevere vomiting and purging of blood, by taking only ſix drachms of the cold-

drawn

drawn oil, which he had kept a little too long, but had uſed ſeveral times before without any inconvenience.

WHATEVER medicine be uſed to obtain ſtools, it ought to be of the mildeſt, relaxing, and lubricating kind. In one caſe, indeed, where, from the pain being long fixed, the frequent return of the vomiting, the tenſion of the abdomen, and the ſhort and imperfect relief afforded by opium, I apprehended an approaching ileus, I had recourſe, after bleeding, to the more active purgatives with calomel, in the form of pills; which being adminiſtered one by one, a paſſage was at length opened. During the operation, the pain was excruciating; but the patient being put into the warm bath, and a clyſter of warm oil with tinct. thebaica injected, perfect eaſe, which could never be obtained before, ſuc-

ceeded, and the diſeaſe yielded afterwards apace.

INTERNAL inflammation, if it accede to this diſorder or any other, is, in this climate, diſcovered with difficulty, eſpecially in negroes. The pulſe is but little to be depended on; even the ſimple preſence of a fever can ſcarcely be inferred from it alone; and I have known ſuch irregularities in it, when there has been hardly any indiſpoſition, as, if there had been other concurrent ſymptoms, would have induced me to conclude death to be at hand. Neither does the fever always attend internal inflammation: I have known not only ſlighter peripneumonies and pleuriſies, but thoſe which have ended fatally, to have never been accompanied with fever. This, indeed, is ſometimes, but not always, the effect of oppreſſion of the lungs; of which I have ſeen inſtances, where the ſick could

could ſcarce either breathe or cough, and the obſtacle to the action of the heart was ſo great, that the pulſe was hardly to be felt; the extremities were cold; and the whole body ſhivered and trembled to ſuch a degree, that one, not well acquainted with the cauſe of theſe ſymptoms, would be apt to omit the only means of ſaving life, viz. bleeding very plentifully, in a recumbent poſture, and that repeatedly. But to return from this digreſſion.

The opium and antiſpaſmodics muſt be continued during the uſe of the purging medicine, in nearly the ſame manner as before; the quantity and frequency of the doſes being varied, according to the circumſtances of the caſe.

In this cholic, as well as in the colica pictonum, cathartics bring away, ſooner or later, a great number of hard globules like ſheeps dung, with

great relief to the patient: but theſe ſcybala do not often come away with the firſt ſtools, which are generally liquid; and, until they are diſcharged, there is ſometimes a ſmall particular part of the abdomen, about the colon, where a fixed pain is ſeated. This circumſtance has often been a matter of ſpeculation to me, in which I have not been able to ſatisfy myſelf, whether the cells of the colon might not be ſo contracted, as to retain theſe hardened excrements in their cavities, and, at the ſame time, permit a paſſage to liquid fæces, through the centre of the gut*; or whether the periſtallic motion, tending downwards, might not

* This appears to be the opinion of Prof. De Hean, and is, perhaps, the moſt probable, vide Rat. Medendi, cap. 24. It is a pity, that the emollient, lubricating, diluting, and inveloping method, ſo much recommended by this gentleman, is not more followed in all the ſpecies of this diſorder.

be

be continued beyond the ſtricture, which it could not reſolve, ſo as to evacuate the contents of the great guts below it, eſpecially if aſſiſted by clyſters. I have known a patient, after having had ſeveral ſtools, pertinaciouſly declare, that he ſtill had no paſſage through him. After theſe globules are come away, a return of the ſpaſms commonly generate more; from whence it appears, that, in this kind of cholic, this hardening of the fæces is to be conſidered rather as an effect, than a cauſe of the diſorder.

If the ſtools procured by the laxative medicine gradually carry downwards the cauſe of the diſeaſe, nothing further is to be done, but to perſiſt in its uſe, and that of the opium and antiſpaſmodics, till the cholic be intirely removed. But if, as I have already obſerved, about the time when the ſpaſms are relaxed,

and ſtools are obtained, a gulping up, or vomiting of bilious matter ſhould come on, then in caſe the copiouſneſs of the diſcharge be not ſufficient of itſelf, with the aſſiſtance of a proper waſh, to empty the ſtomach, ſmall but repeated doſes of emetic tartar may be uſed with great advantage, which by evacuating the cauſe of the diſtemper, will greatly ſhorten its duration. I am by no means of opinion, that an emetic ſhould be given before the ſtomach and bowels are eaſy, and a paſſage is opened downwards; but, after that time, I am certain, that it may not only be uſed with ſafety, but is ſometimes neceſſary; as the morbific cauſe cannot otherwiſe be ſo effectually diſcharged.

When the diſeaſe is managed in this manner, and its cauſe is early and effectually expelled out of the body, it happens but rarely, that any

any obſtinate coſtiveneſs remains; on the contrary, I have frequently found it neceſſary to leave off the uſe of the oily purging medicine, from the bowels being inclined to the oppoſite ſtate. If, however, any coſtiveneſs, or diſpoſition in the inteſtines to be ſpaſmodically affected ſhould continue, nothing, perhaps, will conduce more to remove theſe ſymptoms, than aſſafœtida and the other fetid gums taken conſtantly for ſome time. I am alſo inclined to believe, that, by thoſe means, paralytic ſymptoms may moſt commonly be prevented; thus much I can certainly ſay, that they have never occurred in any perſon under my care. The only ill conſequences of this diſorder, that I have ſeen, were the piles, an hydrocele, and an inteſtinal hernia; which all happened in the elderly gentleman, I

have

have formerly mentioned. The piles and hydrocele, I ſuppoſe, were occaſioned by the ſpaſms of the abdomen compreſſing the veins, and lymphatic veſſels, returning from the parts in which theſe diſorders were ſeated; the rupture, partly by the violent ſtraining in making water, on account of a ſevere dyſury, and partly through the relaxation proceeding from the uſe of the warm bath.

This diſeaſe, as I am informed, has abated very much, within theſe few years, both of its frequency and ſeverity. Formerly there were not many people here, as I am aſſured by perſons of veracity, who had not been, more or leſs, afflicted with it; and moſt of them retained ſome of its paralytic effects. The greater degree of temperance, that has of late years prevailed, and ſeems to be increaſing, muſt, without doubt, have been pro-

productive of more general health; but this change in the endemial cholic is commonly attributed by intelligent people, to the going warmer cloathed, and ſleeping warmer at night, than formerly; and I have reaſon to believe the obſervation to be juſt. At that time when a man went out of the houſe on buſineſs or diverſion, he uſed to put on his coat; when he came home, ſweating at every pore, he threw it off, and choſe the moſt airy, and cooleſt part of the piazza to ſit in. The ſame impatience of warmth prompted him to expoſe himſelf in the ſame manner in the evening (after a hot day, and being, perhaps, ſtill more heated with ſtrong Madeira wine) to the cold land breeze, which deſcends from the mountains. At night the only covering uſed then, and by ſome people even now, was a thin linen ſheet, after going much

warmer

warmer cloathed through the heat of the day.

The texture of the human body is ſo rarefied by the perpetual ſummer of this climate, that we are much more ſenſible, particularly of cold, than your denſe European bodies; and a cold blaſt of wind ſeems ſometimes to penetrate to the very vitals. The cloathing uſed at preſent cannot intirely prevent this effect; but it muſt have been much greater on one who expoſed himſelf to the breeze, with ſcarcely any other covering but his ſhirt. But farther, notwithſtanding the diverſity of ſeaſons is not ſo great here, as in countries more remote from the equator, yet the irregularity of this climate, with reſpect to the ſudden changes, that happen in the ſame day, is extreme; though perhaps not equally ſo in all parts of the country. Where I live I have ſeveral times remarked the

the difference of twenty degrees, on Fahrenheit's ſcale, in the temperature of the air, at ſix o'clock in the morning, and three o'clock in the afternoon, of the ſame day.

The cuſtom gains ground apace of accommodating the dreſs to the circumſtances of the weather; and a ſtuff or cloath waiſtcoat, which would formerly have been looked upon as a prodigy, is now become very common. The wearing a very thin dreſs has been thought abſolutely neceſſary, and been inculcated by phyſicians, to prevent the diſorders to which the inhabitants of hot countries are more particularly obnoxious: but if it be conſidered, that the grand means of preventing perhaps the greater number of diſeaſes, are that admirable diſpoſition which nature has made in the animal œconomy, for carrying off by the excretories, whatever is noxious to,

or no further uſeful in the body, and of how great conſequence the cutaneous diſcharge is for that purpoſe, it may readily be conceived, that the dreſs which moſt certainly ſecures that function from being perpetually interrupted, will be moſt likely to preſerve health.

It is by no means my intention, to recommend it to any one, to load himſelf with cloaths, ſo as to increaſe the animal heat; neither do I decide whether or not the form of the dreſs now in uſe, is properly adapted to warm climates. I only mean to ſay, that a habit, which ſits looſe on the body, of ſuch a thickneſs as will obſtruct the appulſe of a cold blaſt of wind to the ſkin, will be found more healthful, as well as more agreeable to the wearer, than the tight, thin cloathing more generally uſed in this part of the world: and I believe likewiſe, that a per-

a perſon, ſtanding in the ſun-ſhine in his ſhirt, will readily acknowledge, that it would be no paradox, were I to ſay, that cloaths of the kind I mention, may ſometimes be uſeful to keep out the heat.

WERE it requiſite, it would be no difficult matter to ſhew, that the expoſing the body to ſudden cold, and the conſtriction of the cutaneous veſſels, as well as of thoſe more deeply ſeated, the urging their contents into thoſe of the viſcera, and the turning in the acrid, perſpirable matter upon the internal excretories, conſequent thereon, are the moſt common exciting cauſes of acute diſorders in this country. Hence that variety of ſpaſmodic affections of the external muſcles, and alſo of the viſcera; thoſe ſudden internal inflammations, anginæ, peripneumonies, pleuriſies, &c. and that frequency

of fevers with vomiting and purging of bile.

To this it may be objected, that negroes, who are more expoſed to the viciſſitudes of the weather than white people, are but ſeldom troubled with bilious complaints, and never with the endemial cholic. To which it may be anſwered, that, although negroes are not much ſubject to bilious affections, yet the other diſorders, which proceed from the body being expoſed to cold, are much more frequent in them than in whites, particularly thoſe of the ſtomach and bowels. That they are not much diſpoſed to be affected with bilious ſymptoms, may proceed from the ſmall quantity of animal food they uſe; which in general is barely ſufficient to aſſiſt the digeſtion of the vegetable part of their victuals; and perhaps more particularly from their conſtitutions being

being more robuſt, on account of the labour and hardſhips they go through, and being likewiſe much more torpid and ſluggiſh, than thoſe of white people. Such ſtimulants as would throw an European into a fever, have ſcarce the leaſt effect on a negro; a circumſtance, which renders it almoſt impoſſible to ſave the latter in a low ſtate, from which the former might be recovered with no great difficulty.

The irritability of the fibræ motrices ſeems to have much more influence, in the generation of bilious diſorders, than, perhaps, has been generally ſuſpected; as the effects of a violent fit of paſſion in ſome conſtitutions; the ſymptoms, that attend many hyſteric caſes; the bilious vomiting occaſioned in ſome people, by too ſevere agitation of the body, and by riding in this country; and the conſequences of very moderate ſtimuli,

and even a very gentle purge in many perſons, who are ſubject to bilious complaints towards the latter part of the year, beſides many other circumſtances to the ſame purpoſe, that might eaſily be collected, may ſuggeſt. Avicenna ſeems to have been ſenſible of this, when he ſaid, *Cave ne inducas effervescentiam biliosorum.*

J. QUIER.

VII.

VII.

An Account of the True Bilious, or Yellow Fever; and of the Remitting and Intermitting Fevers of the Weſt Indies. *By the late* John Hume, *M. D. Commiſſioner for the Sick and Hurt of the Royal Navy.*

PREVIOUS to entering on the ſubject of the few following ſheets, it may be a ſatisfaction to the reader to know ſomething of the Hiſtory and Character of the Author.

HE was the ſon of a gentleman in the South of Scotland. Early in life he dedicated himſelf to the ſtudies of phyſick and of ſurgery; and, after having had a liberal edu-

cation, he ſerved near forty years as a ſurgeon in the Royal Navy; during ten years of which (from the year 1739 to the year 1749) he had the care of the Naval Hoſpital at Jamaica, at a time when there were large fleets in the Weſt India Seas, on account of the war; ſo that he had the greateſt opportunity of any man, in his time, of making obſervations on the diſeaſes treated of.

As a reward for his long and faithful ſervices, he was appointed a Commiſſioner for the Sick and Hurt of the Royal Navy, and the medical department falling to his ſhare, he judged it proper to take a degree of doctor in phyſick.

He was a man of the ſtricteſt probity, and of a good underſtanding; was an agreeable companion, and endued with univerſal benevolence to mankind, being never more happy than when he had it in his power to ſerve thoſe whom he thought

thought deſerving. The few following ſheets will be a laſting monument of his abilities in the way of his profeſſion; and of his humanity, and attention to the welfare of the numerous ſick who were committed to his care.

After having ſpent a life in the conſtant exerciſe of every ſocial virtue, he died in the ſeventy-firſt year of his age (A.D. 1777), ſincerely regretted by all thoſe who had had the pleaſure of his acquaintance.

Of the Yellow Fever.

THIS fever is diſtinguiſhed from all others by the following ſymptoms:

By a ſudden and ſhort chillineſs; faintneſs; giddineſs; throbbing pains in the head and loins; glowings and flufhing in the face; redneſs and burning in the eyes; ſickneſs, retchings and vomitings of bile, ſometimes

green, but for the moſt part yellow and bitter; ſoreneſs and violent oppreſſion of the præcordia; a ſenſation of being hard bound round the cheſt with a ſtrong cord; a difficult, laborious and painful reſpiration; anxiety; liſtleſsneſs, and deſpondency.

The pulſe is at firſt full, quick, and ſtrong, but, in forty-eight hours after ſeizure, or thereabouts, it ſometimes becomes calm and regular, ſcarce to be diſtinguiſhed from the pulſe of a perſon in health; and it continues in this ſtate for twenty-four or thirty hours. The blood taken away is florid, and the craſſamentum of a looſe texture; the ſkin is ſometimes dry; when moiſt, it is only partially ſo about the pit of the ſtomach, neck and face; probably occaſioned by the ſickneſs and ſtrainings to vomit.

After the patient has been ill for forty, forty-four, or forty-eight

hours, the eyes change to a yellow colour, and ſoon after the neck and whole ſurface of the ſkin take that colour likewiſe.

About the end of the third, or beginning of the fourth day from the firſt attack, the texture of the blood comes to be ſo broken down and diſſolved, as to be capable of entering the ſmalleſt veſſels; and ouzes out from the noſe, mouth, ears, eyes, anus, and by the ſkin where bliſters have been recently applied. About this time the pulſe ſinks, flutters, and ſometimes intermits; the patient becomes comatoſe, and, at intervals, delirious. Startings and univerſal tremors ſucceed; and what is now vomited begins to change from a yellow to a dirty colour like kennel water; ſmall atoms are ſeen floating in it, like grains of duſt or black ſand, but they ſoon ſettle to the bottom of the veſſel, like coffee grounds or ſoot. After this appear-

ance, clots of black, coagulated blood are ſome times vomited, or rather inſenſibly gulped up; and ſometimes grumous blood is voided by the anus, or is mixed with the urine: death quickly follows. Sometimes, a few hours before death, I have found livid ſpots on the breaſt, which ſoon after increaſed in number; and the ſides and back are likewiſe often covered with them, in two or three hours after the patient dies.

THESE are the ſymptoms, and the order in which they moſt commonly come on, and ſucceed each other; the whole are incident to the diſeaſe, but not to every patient; ſome, for example, have no chilline ſs, others have not the faintneſs, giddineſs, glowings, nor fluſhings in the face.

I HAVE ſeen a few caſes, where the comatoſe and bleeding ſymptoms have ſucceeded to the ardent ſtate, without the intervention of the yellow ſtage;

ſtage; many have a favourable criſis before the period when that appearance uſually comes on, and ſome in the courſe of it.

The moſt inſeparable characteriſtics of the diſeaſe are,—The ſickneſs and inceſſant bilious vomitings; the yellowneſs of the eyes and ſkin, notwithſtanding there have been a few caſes amongſt many, where that ſymptom has not appeared; the oppreſſion on the præcordia; the difficult, laborious and painful reſpiration; the florid colour of the blood; and the ſoft looſe colour of its craſſamentum; the black vomiting, and the almoſt general hæmorrhages, although peculiar to this diſeaſe, are not conſtant ſymptoms.

When I ſpeak of the ſeveral periods or changes of the diſeaſe, as happening at ſuch and ſuch particular times, I would not be underſtood to mean, that they always fall out at the

the preciſe times I have allotted for their appearance; as when I ſay, "about the cloſe of the third, or beginning of the fourth day from the firſt attack of the diſorder, the texture of the blood comes to be ſo broke down, &c." I do not mean to aſſert, that this change always happens at theſe particular times; for in truth it does not, but, ſometimes, it comes ſooner than the earlieſt of theſe periods, and, at other times, later than the laſt, and ſo of the reſt; my intention being to repreſent things in their ordinary or moſt common courſe.

The bilious fever has, in ſome inſtances, been ſo intenſe and rapid, as to finiſh its courſe, together with the patient's life, in twenty-four hours; but this ſeldom happens, the fever being generally protracted to the fifth, ſixth, ſeventh, or eighth day,

day, and ſometimes, though but rarely, to the ninth or tenth.

In May 1735, I arrived at Barbadoes in a ſhip of war, whoſe compliment was two hundred and fifty men. The crew had been remarkably healthy for twelve months, and, for the laſt four, had drank nothing but water: we had not, on our arrival at this iſland, a ſingle ſick man; but unfortunately each of the common ſailors were paid forty ſhillings, in conſideration of their having had ſhort allowance of proviſions. Having been long without liquor, and thus ſupplied with the means of coming at it, they preſently fell into every kind of riot and exceſs; and, in about ten days after our arrival, the Bilious Fever broke out amongſt us, and, before it ceaſed, it carried off a great number of robuſt, young men, for of ſuch this ſhip's company was wholly made up.

The

THE firſt patient I was called to was, one —— Andrews, a plethoric, muſcular man, about twenty-five years of age: he had not complained three hours when I ſaw him, about ten in the forenoon, yet the oppreſſion on the præcordia, and the bilious vomitings had already ſeized him. His pulſe was full and ſtrong, and I took ſixteen ounces of blood from his arm immediately, and ordered a laxative clyſter to be injected as ſoon as it could be got ready, and enjoined him to drink plentifully of barley water acidulated with the juice of the limes. I called upon him at noon, and was much diſappointed to find the ardent ſymptoms and oppreſſion on his breaſt both increaſed: his vomitings were almoſt continual, and he complained much of his diſtreſs in breathing, and of the burning of his eyes. The reaſons for bleeding him ſtill continuing, I took four-

teen

teen ounces of blood from the ſame orifice; and ordered him the ſame evening a ſcruple of ipecacuanha at ſix o'clock, and at ten applied a large bliſter between his ſhoulders, in hopes of relieving his cheſt.

He continued to vomit, with but ſhort intermiſſions, from the time he took the emetic, although he diſcharged a great deal of bile by ſtool. He had a very reſtleſs night, and continued, through the ſecond day, vomiting, and labouring under the oppreſſion of his breaſt, till about twelve at night, when he died; about forty hours from the time of his being firſt ſeized.

At this time the practice in Barbadoes was, to uſe large and repeated bleeding, vomiting and bliſtering, as recommended by Dr. Town, which method, I, as a ſtranger, thought myſelf obliged to follow.

BEFORE Andrews died, ſeveral others were taken ill; and, except the ſecond bleeding which was omitted, they were treated in the ſame way with no better ſucceſs.

I HAD Andrews's body opened, and found the following morbid appearances.—There was a little ropy bile in his ſtomach, of the colour of what he had vomited; the gall bladder and biliary ducts were full of bile; the liver, inſtead of being of a dark red colour, as it naturally is, was of a pale yellow, reſembling thoſe parts of the ſtomach and colon in contact with the gall bladder. On the lower extremity of the ſtomach, towards the pylorus, there were evident marks of inflammation, and likewiſe on the ſuperior part of the duodenum; the liver was very large and turgid with bile, and harder than in a natural ſtate *. I

* Dr. Mackittrick, who had practiſed phyſic for a number of years in the Weſt-Indies, publiſhed,

I OPENED the man who died next to Andrews: his complaints had been nearly the ſame, but he had

liſhed, at Edinburgh in the year 1766, an Inaugural Diſſertation, De Febre Indiæ occidentalis malignâ flavâ; in which he mentions his having opened a man who died the third day of this fever. The whole body, he ſays, had ſomewhat of a livid appearance; the cavity of the abdomen ſeemed dry and deſtitute of ſerum; the omentum was full of black blood, and had, on its lower edge, a number of round glandular bodies, full of the ſame ſort of black blood; the coats of the ſtomach, duodenum, and ileum, were remarkably inflamed; the liver was not increaſed in its bulk, though its texture ſeemed ſomewhat vitiated; the gall-bladder was full of black bile, and there were ſome round worms in the cavity of the inteſtines; the urniary bladder was a little inflamed the lungs were ſound, and the pericardium contained a more viſcid yellow ſerum, and in larger quantity than common; and the cellular membranes were every where filled with a tough clay-coloured mucilage.

Dr. Mackittrick obſerves, that, in the bodies of other patients who died of this fever, he commonly found the liver ſphacelated, the gall-bladder full of black bile, and the veins turgid with black fluid blood. See Diſſert. Inaugural, p. 7, and 8, &c.

lived

lived twenty-four hours longer. There was not ſo large a portion of the ſtomach or duodenum inflamed; his liver was preternaturally enlarged, but not to ſuch a ſize as that of Andrews; the gall bladder was about half full; and no obſtruction to the paſſage of the bile into the inteſtine was found in either. I imagined that the pylorus was contracted, particularly in the firſt man; but in this I was not certain whether it was ſo or not.

No marks of mortification were found on the internal or external ſurface of the ſtomachs of either of theſe men; but I opened two not long after, who died in a more advanced ſtate of the diſeaſe, and found one of them, who had vomited the black matter, in a ſtate of mortification every where, with ſome coagulated blood in it; the internal coat of the other was covered with livid

livid ſpots of different ſizes, and, externally, towards the bottom, there were large black ſpots of the ſize of a crown piece.

In one of theſe laſt ſubjects I diſcovered ſome petechiæ on his breaſt before death; but, two hours afterwards, the whole ſides and back were covered ſo thick with them, eſpecially the back, that the ſkin was all over livid without diſtinction of ſpots.

Having obſerved, with much regret, the bad ſucceſs I had from bleeding and vomiting, and that the firſt man who died, evidently ſunk after the firſt bleeding, I bled the reſt but once; and, when the patients were not plethoric, I have frequently omitted the operation altogether, as I ſometimes did when I had not ſeen them within twenty-four hours of being taken ill.

I HAVE ſeen ſome ſubjects opened, on whoſe ſtomachs no marks of inflammation could be diſcovered; yet even theſe had exceſſive vomiting.

THE ſtate in which I found the ſtomachs of the two firſt men who died, deterred me from giving any more vomits; and I have ever found that bowel ſo delicate and irritable, that I have never ſince ventured to give any emetic whatever. There ſeems, however, to be a neceſſity to evacuate the bile by the ſtomach by the inteſtines, and by the ſkin when there is a tendency to ſweat *.

* ALL practitioners, in the Weſt-Indies, now agree, that the principal intentions in the cure of this fever muſt be, to correct the too great tendency of the blood to putrefaction, and to carry off the putrid bile as expeditiouſly and ſafely as poſſible. That taking ſeven, eight, or ten ounces of blood from ſtrong or plethoric people, on the firſt or ſecond day, is commonly of ſervice; but that the repetition of this evacuation is in danger of ſinking the patient too much; and, that after the third day, this fever will ſeldom bear bleeding at all.

AFTER

AFTER bleeding, I uſed to order a clyſter to be got ready of eight ounces of common decoction, in which was diſſolved one ounce of lenitive electuary, two ounces of oil, and two ſpoonfuls of brown ſugar; for, as the ſick are generally coſtive at firſt, it is highly neceſſary to clear the inteſtines of fœces, in a diſeaſe that tends ſo faſt to putrefaction; and it frequently happened, that bilious ſtools followed the rejection of the clyſter, almoſt conſtantly, if the vomiting was come on before it was given.

FOR common drink, I ordered a pleaſant ſherbett made of freſh, ripe limes, not too ſour, to be drank milk-warm; the patient's thirſt being about this time very great: a beverage of this kind is agreeable to moſt palates, and, at firſt, they commonly prefer it to every other. It often happened, that they deſired to have it cold, and rather than that they ſhould not drink

it, I ordered them to be indulged in their requeſt.

I FOUND this not only a pleaſant drink for the ſick, but looked on it as the moſt powerful antiſeptic, and antiemetic I could give them. It is true, that, on firſt uſing, it was thrown up as faſt as water when an emetic is given; but ſuch as had reſolution to perſevere in drinking it, ſoon found their ſick fits leſs ſevere; and, after the firſt three or four draughts, every ſucceeding one remained longer on the ſtomach than that before it, ſo that, in a few hours, the intermiſſions between the fits of vomiting came to be ſo lengthened, that I could attempt giving ſome mild purgative medicine *. That I commonly ordered,

* The following is the purgative medicine, recommended by Dr. Hillary, for this purpoſe:

℞. Mannæ optæ ſeſcunciam. vel uncias ij. tartar. vitri olat. gr. x. ſolve in ſeri lactis (præpar. cum vin Madeir. q. s.) unc vi. quibus adde

Tamarind condit. unc. 1m miſce optime & colaturæ adde. Tinc-

dered, was two ounces of manna, and one of cream of tartar, diſſolved in three pints of limonade. Of this I gave them a few ſpoonfuls, or a tea-cup full, at ſuch diſtances of time as I found their ſtomachs could bear; regulating the quantity and times of giving it by that rule. The taſte of this ſolution not being much different from their common drink, they took it with leſs reluctance. The manna made leſs ſugar neceſſary, and cream of tartar leſs of the acid; it was ſtill the ſame kind of beverage made more opening.

I HAVE often been ſurprized, that, the limonade I am ſpeaking of, ſo agreeable to the generality of ſick people, ſo eaſily come at, and ſo proper in the bilious fever, even as a medicine, has not been more recom-

Tincturæ ſenæ unciam dimidiam, divide in partes quatuor, & capiat æger unam omni hora donec laxetus alvus.

mended. I was always ſo fully ſatisfied of its utility, that I conſtantly preſſed the free uſe of it upon the ſick; nor did I ever refuſe them the moderate uſe of the cooling ſubacid, antiſeptic fruits of the climate, ſuch as oranges, pine-apples, allegator pears, chaddocks, &c. They grow in the country in great abundance, and I never found them hurtful to the ſick; on the contrary, I always thought them beneficial to them.

Sick men are apt to be tired of every thing; and this was often the caſe with the limonade, and it likewiſe diſagreed with ſome ſtomachs; I then changed it for barley-water, thin gruel, or emulſions of the cold ſeeds, or of almonds. I have, ſometimes found a drink, made by pouring boiling water on the caſſada cake toaſted, and letting it ſtand till almoſt cold, much liked by ſome ſick men; and, when the caſſada bread could

could not be had, I have directed ſea-biſcuit to be well toaſted, then broke into ſmall pieces, and the boiling-water poured on it, as on the caſſada. Many of the men liked theſe for a time, and they were of uſe, as they made a variety.

The liquor of the cocoa-nut could not be got near the towns in ſuch plenty, as to ſupply any conſiderable number of men; but it is always craved for by thoſe who are acquainted with it; and it is a pleaſant ſub-acid, cooling natural emulſion, or rather whey; the nuts contain from half a pint to a quart.

In ſome few caſes, after the firſt claſs of ſymptoms had continued for ſome time, when the patient perſevered in drinking the warm limonade, although he was indulged at intervals with a draught of it cold, a ſweat would ſometimes break out, and free the patient from any further

apprehenſion of danger; for, when the ſweat was plentiful, the vomiting ſeldom continued long; and, when theſe ceaſed, the relief of the breaſt, and the laborious breathing, ſoon followed, ſometimes before the approach of the yellow ſtate, and ſometimes in the courſe of it. I have, likewiſe, frequently ſeen this favourable turn in the third ſtage, provided the ſweats broke out before the dark, or black vomiting appeared. I have heard of recoveries after that ſymptom; but it never happened to me to ſee any of them.

From the external bleeding by the emunctories already mentioned, I have ſeen many recover; for, although this is a bad caſe, it is not without hope. The blood, at ſuch times, is ſo diſſolved, that the thinner parts eſcape through the ſmaller veſſels, and there is reaſon to fear a gangrenous diatheſis of the blood, eſpecially if it

it ouzes from the gums, noſe, or eyes; when it is mixed with the urine, or flows inſenſibly from the anus, there is ſtill greater danger; but, when the fluid vomited is of a coffee-colour, or when it is black, a mortification has then actually taken place; for, in all ſuch ſubjects as I have opened myſelf, or ſeen opened by others, after having had black vomiting, the ſtomach was always found mortified, and leſs or more of ſuch blood as they had vomited was found in the cavity of it, and could eaſily be preſſed from the veſſels.

Manna and cream of tartar was continued occaſionally through the courſe of the diſeaſe, only ſometimes it was changed for a tincture of rhubarb, drawn in weak cinnamon-water, to render it more grateful to the ſtomach, and this was given them occaſionally, in ſuch quantities as they could bear, in the ſame manner

ner as the manna, &c. the intention in giving either being to procure frequent bilious ſtools, and, when they failed in doing this, the clyſter was injected; but the heat, frequency, and acrimony of theſe bilious ſtools, often deprived us of this reſource, for the extremity of the rectum many times became ſo tender, as not to be able to bear the introduction of the ſmalleſt and ſmootheſt pipe.

When I obſerved any tendency to ſweating, I always diſcontinued the laxative medicines, and gave ſix drachms, or an ounce of ſpiritus mindereri, and repeated the doſe in five or ſix hours, if the ſweat continued ſo long, encouraging the ſick to drink a weak infuſion of ſage acidulated, if they deſire to have it ſo *.

I HAVE

* Dr. Mackittrick, in his Inaugural Diſſertation, mentions, that Dr. Dalrymple, who was phyſician to the army ſent on the Carthagena expedition in the year 1740, had cured many whoſe caſes

I HAVE, ſeveral times, given the diaphoretics recommended by Dr. Warren, as well as others; but I never could procure ſweats by forcing it in the manner he adviſes; that which I mentioned is ſpontaneous; no attempt is made to open the ſkin, till there is ſome tendency to an evacuation that way; and afterwards nature is only gently ſolicited, not forced to continue it.

WHILST I remained at Barbadoes, I continued to bliſter the back and arms before the yellow ſtage came on, or during its continuance; but, on going down to Jamaica, I became acquainted with Dr. Cheney, whoſe practice in this fever was, to bleed plethoric people once, if he ſaw them before the ſecond ſtage came on; if

ſes ſeemed deſperate, by wrapping them in blankets wetted with warm water, which ſoftened and relaxed the ſkin, and brought out a profuſe ſweat, which carried off the fever. See p. 59.

not, he omitted the operation. He never gave emetics, but relied much on lenient purges; and, when the vomiting, oppreſſion of the præcordia, with the painful laborious reſpiration, continued twelve or fourteen hours after the yellow or ſecond ſtage had ſeized the patient, which it uſually did, towards the end of the ſecond, or the beginning of the third day, he conſtantly applied bliſters to both thighs: he told me, that he had obſerved the vomitings to give way more readily to bliſters on the thighs, than when they were applied on the ſuperior extremities, or to the trunk of the body; and he added, that, by raiſing an artificial inflammation in one part, eſpecially in a depending one, we abate the natural one in another. I had, afterwards, many opportunities of obſerving the truth of this. When the ſick complained much of the bliſters on their

thighs,

thighs, the vomitings uſually began to abate, and to ceaſe entirely as the irritation and inflamation encreaſed.

Blisters on the thighs are apt to raiſe greater inflammations than on other parts: hence practitioners have been intimidated from applying them in this diſeaſe, becauſe authors have ſaid, there is danger of theſe intenſe inflammations ending in gangrenes: I never ſaw this happen, except when there was a tendency in the habit to a general mortification; and, when this is the caſe, the parts where bliſters have been applied, may probably mortify firſt. Inſtead of apprehending danger from the intenſeneſs of the inflammation, often obſerveable round the edges of the bliſters, I was always much pleaſed to ſee it, and to hear them complain of great pain: when this was the caſe, I could pretty confidently tell them that their vomitings would ceaſe, and that their breath-

breathing would ſoon become eaſier, and that they would have ſome reſt.

Dr. Warren was afraid of bliſters increaſing the acrimony of the blood; and Dr. Hillary alledges, he has ſeen bad effects from their uſe; but, in ten years practice, I never ſaw any bad conſequences from their application, but, on the contrary, when applied as Dr. Cheney adviſed, have ſeen many ſnatched, as it were, from the moſt imminent danger. And in ſome caſes, when the vomiting was ſevere, and the intervals, between the fits of vomiting, but ſhort, I have been obliged to truſt the cure entirely to bliſters and clyſters. I generally applied them before the blood was broken down and diſſolved in its texture; ſo that they might produce their effects before this happened, and the diſſolution ſhewed itſelf by the blood eſcaping from the ſerous veſſels.

When

When the firſt ſymptoms are intenſe, the yellow ſtage comes on earlier than the uſual time of its appearance; when it does, the greater is the patient's danger, and, vice verſa; for, if it keeps off to ſome time in the fifth day, there is room to hope for a favourable event; but, happening before the expiration of the ſecond day, the bliſters ought to be applied as ſoon as it is perceived. In the few caſes where the third ſtage ſucceeded to the firſt, without the intervention of the ſecond, one rule for the time of applying bliſters is wanting, which I have ſaid ſhould be twelve or fourteen hours after the appearance of the yellowneſs: when that did not ſhew itſelf, ten or twelve hours before the time when the third ſtage uſually comes on, I uſed to apply bliſters.

This fever, like ſome others, often ends in ſcabby eruptions about the

the mouth and noſe, and, ſometimes, I have ſeen ſmall boils, from the ſize of a common pea, to that of a horſe-bean, break out on the breaſt, ſides, ſhoulders, or hips, and prove critical. Theſe little phelgmons do not come to ſuppuration; but, like carbuncles, mortify on the top; a ſlough ſeparates like the eſcar of an iſſue made with a cauſtic, and little ſores afterwards digeſt and heal ſoon; theſe eruptions happened to ſome of the ſick, whoſe fevers continued to the longeſt periods, as to the ninth or tenth day; the ſame kind of boils frequently appeared on the thighs, near the bliſters; but ulcers were ſtill more frequently formed, ſometimes larger, ſometimes ſmaller on the parts where the bliſters had been applied, or round the edges; the ulcers were always ſalutary, and never attended with any bad conſequences. It is, however, a neceſſary caution, not to apply bliſ-

ters

ters lower than the calf of the leg; for I have ſeen ſome few caſes, where bliſters were applied to the ankles, and the bones being there thinly covered, became carious, which in this climate they are apt to do very ſoon after being laid bare.

On the coaſt of Guinea I had twelve or thirteen men under my care, in a malignant fever; ſeven of theſe only recovered: after the fever had continued on ſome of them twenty, on others twenty-five or twenty-ſix days, on others thirty, every one of thoſe who recovered had the criſis by biles or phlegmons, of the ſame kind with thoſe above deſcribed, only a great deal larger, but the ſkin mortified, ſloughed off, and the ulcers digeſted and healed in the ſame manner. Thoſe who died of this malignant fever, were carried off the eight or ninth day without eruptions

of any kind, except petechiæ on the breaſts of the two laſt.

THERE is one critical appearance, which I do not remember to have ſeen taken notice of by any writer on the bilious fever, and which, I believe, has been obſerved by few practitioners (it ſometimes happens in the beginning of the third ſtage, and ſometimes in the courſe of it), which is, one or more cluſters of ſmall florid eruptions, on or near the pit of the ſtomach, not larger than meaſles, and from three or four, to ſeven or eight in a cluſter.

I ATTENDED a gentleman, who came over with governor Cunningham, and who, ſoon after his arrival, was ſeized with the bilious fever; Dr. Cheney was his phyſician. We left him one evening, in the yellow ſtate of the fever, with every unpromiſing appearance, expecting to find him next morning in the laſt ſtage of the

the diſeaſe; but about two in the morning he had fallen into a ſound ſleep, and continued in it till near eight; the vomiting and oppreſſion on his breaſt had left him, and he complained only of a great ſoreneſs of his ſtomach externally. Bliſters had been applied to his thighs the evening before; but they had raiſed no inflammation, and had but juſt ruffled the ſkin here and there. Dr. Cheney looked at his breaſt, and made me take notice of one cluſter only of the above-mentioned ſpots, not more than four in number, aſſuring me, at the ſame time, that he had frequently ſeen people relieved, as this gentlemen was, without any other ſenſible criſis whatever. Perhaps the exility, and inconſiderable number of thoſe puſtules or eruptions may be the reaſon of their having eſcaped the obſervation of practitioners. I often

found them afterwards, and always, as Dr. Cheney had told me, ſure ſigns of the patient's ſafety.

In whatever ſtate of the diſeaſe the ſick are relieved, whether by ſweats, bilious ſtools, boils, eruptions, or by bliſters, and it is evident from the ceſſation of the vomiting, from the load at the breaſt being removed, and from the reſpiration becoming eaſier, that the fever is giving way, we ſhould attempt to give the bark; ſooner would be to no purpoſe, for it would hurt the patient by exaſperating the ſymptoms. I conſtantly gave it in the favourable circumſtances juſt mentioned, and did not find it to diſagree with the patients ſtomachs ſo much as ſome writers have alledged. It is a great advantage to find the men willing to take it, which moſt of them are at this time, whilſt the impreſſion of the pain, and danger from which they

they are but juſt relieved, remains ſtrong upon their minds *.

The preparations of the bark I generally uſed, were either an infuſion of an ounce of the groſs powder, with three drachms of ſnake-root in a quart of Port wine, of which I ordered three or four ſpoonfuls to be given, once in two, three or four hours, as the ſtomach would bear it; or an ounce of the bark with two or three drachms of ſnake-root boiled in three pints of water to a quart, adding two ounces of ſtrong mint-water, and a little ſpirit of lavender to the ſtrained liquor; and this, like the vinous infuſion, was given in ſuch

* Dr. Mackittrick obſerves, that, as often as before the end of the third, or of the fourth day, the belly is freely opened ſo as to prepare the way for the bark, there are great hopes of the patient's ſafety; and ſo ſoon as there is a remiſſion of the ſymptoms attended with an univerſal ſweat, the bark ought to be given freely, without waiting for a full intermiſſion. See his Inaugural Diſſert. p. 66, &c.

quantities, and at ſuch diſtances of time, as the ſick could beſt bear.

THOSE men who were taken ill after the fever had continued three, four, or five weeks among a ſhip's company, uſually had their fevers run out into a greater length, than thoſe who were earlier; and ſuch as ſickened lateſt were liable to fall into intermitting or remitting fevers, the endemics of the climate, before they had recovered from the weakneſs in which the bilious fever had left them. The above preparations of the bark were not only the beſt cordials for ſupporting the vis vitæ, about the time of the criſis, and immediately after it, but they contributed to prevent the intermitting and remitting fevers from attacking the men laſt taken ill; and to ſuch I found it neceſſary to continue the bark for a longer time than to the others.

IN

In the firſt months of my practice in the Weſt Indies, I made trial of opiates at different periods of the fever, and in ſeveral forms. I gave from five or ten to fifteen drops of liquid laudanum, in two or three ſpoonfuls of limonade, or weak cinnamon water; the ſmaller doſes were given after every fit of vomiting, the larger after two or three; but I found them too weak a reſtraint, for ſo great a propenſity to vomit. I have, likewiſe, given a grain, ſometimes a grain and a half of opium in the evening, when, by waſhing the patient's ſtomach by any of the beverages before mentioned, and procuring a number of bilious ſtools, the intervals between the fits of vomiting were become conſiderably lengthened; but I never found that they gave the ſick any ſound or refreſhing ſleep; or that any other advantage was gained by opiates; on the contrary, they added

both to the hurry and to the liſtleſsneſs the patient is always in, whilſt the vomiting continues; and they increaſed the difficulty of breathing. It does not ſeem probable that they can be of any uſe in this diſeaſe, if it is conſidered, that the principal intention of cure, is the evacuation of the offending bile, by every outlet; and to attempt confining it by opiates is to counteract that intention.

After having made frequent trials in the two firſt ſtages of the diſeaſe, with ſolid and with liquid opiates, and always without ſucceſs, I diſcontinued the uſe of them altogether. There is no room for them in the third ſtage when the comatoſe ſymptoms come on; and, when the diſeaſe ends happily, there can be no occaſion to uſe them; the ſick of themſelves almoſt falling into a natural ſleep.

When

When this fever goes off, it leaves the men extremely weak; great care is neceſſary to ſupport them in the courſe of the diſeaſe, and particularly about the time of the criſis, with ſoft, mild, nouriſhing food. During the two firſt days that the vomiting uſually continues, little can be done this way, as whatever we give is, for the moſt part, inſtantly rejected. The only thing I attempted at ſuch times beſides the drink, was a few ſpoonfuls of Port or Madeira wine, mixed with a little loaf ſugar, and one third warm water. When the intermiſſions between the fits of vomiting came to be lengthened, I began to make trial of a little ſpoon meat; ſuch as panada, rice gruel, ſago, ſalop, &c. always mixing a ſmall portion of wine with each meſs; theſe or ſuch other ſpoon meats, were continued for ſome days after the criſis; and for the remainder

der of the convaleſcent ſtate, they had broth for their dinner, made of very young beef, from one to two years old, and ſometimes of mutton; veal was not to be had.

THE appearances of the bilious fever, as related above, were noted down at the bed-ſides of the ſick, during the firſt years of my reſidence in the Weſt Indies; ſome other obſervations on this, and other diſeaſes, were loſt.

DURING my reſidence in Jamaica, I do not remember one inſtance of a ſhip, which remained four or five weeks in port, which totally eſcaped this fever. Thoſe ſhips, which were immediately ſent to ſea on their arrival, eſcaped much better, and had not the diſorder ſo violent abroad, as thoſe who remained ſix weeks in port after their arrival; the violence of the diſorder ſeemed to have been abated, by the conſtitutions being more accuſtomed to the climate, by going to

ſea,

ſea, where people live more healthy than at land; and being under the eye of their officers, they have not ſuch opportunities of running into exceſſes as at ſhore; and hence they are both leſs liable to catch the diſorder, and, if they are attacked with it, they eſcape much better, and the diſorder is milder.

If there are preſervatives againſt the attack of this fever, they muſt, I believe, conſiſt in avoiding exceſſes of every kind; neither making too free with the bottle and good living, nor wantonly expoſing one's ſelf to the ſcorching vertical heat of the ſun, nor dreading to go abroad when buſineſs, or other occaſions require it. In the mind being perfectly at eaſe, and not prejudiced againſt the climate, nor anxious as to future events, and prepoſſeſſed that we ſhall enjoy health, and if it ſhould happen otherwiſe, that we ſhall do well, as many

many thouſands have done before us, I know of no ſuch ſecurity as this manly diſpoſition of mind, nor do I think any one in more danger, than the timid and puſillanimous, ſcarcely excepting the intemperate ſtranger.

THEY do ill offices to their friends, ſetting out for the Weſt Indies, who, by way of convincing them of the great neceſſity they are under of taking all poſſible care of their health, are often reminding them of the fatality of the climate, furniſh them with drugs, and with inſtructions, under what circumſtances they are to be uſed; for ſuch often diſpond, and probably miſuſe the medicines and remedies given them.

THIS fever generally makes its attack after hard drinking, violent exerciſe, dancing, or ſleeping in the open air; and, to ſay the truth, it even often attacks thoſe who have

con-

conducted themſelves in the moſt proper way to preſerve health.

STRONG, muſcular men are moſt liable to it, and ſuffer moſt; thoſe of a lax habit are leaſt liable to it, and are moſt likely to recover.

CREOLE white men are rarely ſeized with it, except after drinking or dancing. Natives, however, going to Europe, and returning, are equally liable to it with Europeans.

I NEVER knew any Creole white woman ill of it; they are extremely temperate, ſeldom drinking any thing but water; and their domeſtic employments keep them in the ſhade.

EUROPEAN white women I have known die of it; but, they are not near ſo liable to it as the other ſex.

EUROPEANS going to Europe, and returning, however often they may have had the bilious fever, are equally liable to it with ſtrangers, who have never been in the country.

YOUTHS

YOUTHS under the age of puberty, are little ſubject to it; I recollect but one inſtance of the great number of youths I have ſeen in this country, who had the fever.

I HAVE never ſeen any negro, male, or female, native, or foreigner, attacked with the bilious fever.

I CANNOT help mentioning, the bad effects that follow from the uſe of free bleeding and vomits, as recommended by Dr. Town; and the impoſſibility of following the method, recommended by Dr. Warren, of keeping patients under blankets, and of making the ſtomach retain the medicines mentioned, to force out a ſweat; and, likewiſe, that we have undoubted proofs that the diſorder is neither a plague, nor contagious, as Dr. Warren has alledged. Dr. Hillary's method of cure is more juſt and rational in its intentions; but

but it ſeems doubtful, whether it can be purſued; for the men can ſcarce be perſuaded, at firſt, to drink warm water, but ſeek after limonade; and I ſhould be afraid to give oxymel ſcilliticum, conſidering how irritable the ſtomach is, and how often the ſick die vomiting, without any provocative or ſtimulant whatever; and I never had the good fortune to ſee ſix hours reſt, or reſpite, procured by opiates, given whilſt the fever continued to rage; but, on the contrary, found the ſymptoms exaſperated by their uſe, as I have already obſerved; nor did I find, that the ſick had any refreſhing ſleep, till about the time of ſome of the critical appearances before mentioned. The third intention of cure is brought about by antiſeptic purges, which, at all times, are very proper. When the heat abates, and the patient becomes comatoſe, and the blood diſſolved on

the third day, Dr. Hillary ſays, the bark ſhould ſeem to be a good medicine; but he could never get the patient's ſtomach to retain it; but I often found that, at this time of the fever, bliſters, applied to the thighs, procured a receſs from vomiting; and that the bark ſat eaſily on the ſtomach. I cannot help thinking that Dr. Hillary's ſuccedaneum for the bark (or the infuſion of ſnake-root) is a medicine which would produce but ſlow effects, given in ſuch ſmall quantities, and at ſuch a diſtance of time from each other, as the Doctor directs *.

THIS

* The following is the receipt of the infuſion of ſnake-root, recommended by Dr. Hillary:

℞. Rad. ſerpentar Virginian drachm ii. Croci Anglican. drachm. dimidiam m. & infunde vaſe clauſo in aquæ puræ bullientis, q. s. & dein.

℞. Hujus infuſionis colatæ unc. vi, Aq. menth. ſimp. unc. ii, Vini Madeirienſis, unc. iv, Syrup. croci vel e meconio, unc. i, Elix. vitriol acidi

THIS fever, which commits ſo much havock, and occaſions ſuch a mortality in his majeſty's navy, happens principally in the firſt year after their arrival in the Weſt Indies; often in the two or three firſt months; for when a ſhip's company has had their ſeaſoning, as it is called, that is, after the bilious fever has been amongſt them, it is well known that the men are then uſually as healthy as in any part of Europe. I ſhall ſubjoin a liſt of the numbers of ſeamen and marines, who were ſent ſick to the king's hoſpitals at Jamaica, for two years, in the middle of the former

acidi guttarum, q. s. ad gratum ſaporem acidum m. capiat æger cochlearia ii, vel iii, omni hora vel omni 2ª hora vel ſœpius pro re natâ.

This infuſion, Dr. Hillary ſays, not only ſat eaſy on the ſtomach, but it raiſed the pulſe when too low; and its exhibition was attended with better ſucceſs than he could have expected. See Dr. Hillary's Obſervations, &c. p. 165.

war; viz. in the years 1741 and 1742, diſtinguiſhing the numbers who died.

Number of ſick ſent on ſhore.

1741.

	No. of Sick.	Died.
In Jan. Feb. and March —	1727 -	358
In April, May and June —	2194 -	409
In July, Aug. and Sept. —	979 -	160
In Oct. Nov. and Dec. —	1463 -	227

1742.

In Jan. Feb. and March —	1391 -	179
In April, May and June —	857 -	94
In July, Aug. and Sept. —	1151 -	113
In Oct. Nov. and Dec. —	1038 -	113
Total.	11800	1653.

Hence we ſee, that the proportion of deaths were nearly one in ſeven, of the whole number ſent to the

the hoſpitals. What number died aboard the ſhips, or what proportion there was there of deaths to the recoveries, I cannot ſay; but, I believe, the numbers who died in the ſhips were inconſiderable, if we except thoſe who died whilſt the fleet lay before Carthagena. Ships ſeldom become ſickly at ſea; on the contrary, they generally come into port healthy, and they ſend their men to the hoſpital as ſoon as they complain in the harbour.

THE foregoing account is an exact one, becauſe it is taken from the hoſpital books, which are checked by the books of each ſhip to which the dead and ſick men belonged.

WHAT proportion of the eleven thouſand eight hundred men had the bilious fever, cannot be aſcertained; but, as in the two years referred to, many ſhips arrived from England, and as the greateſt part of them were

capital ones, with their higheſt complement of men, the numbers taken ill of the bilious fever, was proportionally larger than at any other time during my ſervice in the hoſpital, and perhaps there were not leſs than ſeven thouſand of the whole who had that diſeaſe. Of theſe I uſed to compute, that one thouſand five hundred died (that is, ſomething leſs than one in four), but in this I pretend not to be exact. Of the numbers of ſick ſent on ſhore, in the time ſpecified, as well as of the numbers who died in that time, there can be no doubt.

The mortality in this fever is always great, although it varies at different ſeaſons, and among different ſhip's companies; as they are leſs or more expoſed to the ſun, leſs or more temperate, or according to the work they are employed in.

Great

GREAT as the mortality was amongſt the ſhips, and in the naval hoſpital, it was ſtill far greater among the troops, as it is always in the Weſt Indies. This difference is probably occaſioned by the ſoldiers, from the nature of their duty, being more expoſed to the ſun in their encampments on the ſhore, where the chillineſs and damps, diſperſed through the air by the land-winds, are always more ſenſibly felt than in the ſhips; hence it happens, that ſeamen, who are ſent to wood and water, in uninhabited parts of the Weſt Indies, where the lands are not cleared, and where, for that reaſon, the air is moiſter, are often taken ill on their return to the ſhip; eſpecially, if they have ſlept a night or more aſhore, whilſt not one of the greater number remaining on board have had any complaint.

THE troops, too, undergo a great change and deviation from their uſual way of living; whereas the ſailors ſleep every night in their own beds, they eat the proviſions they are uſed to, and it is dreſſed for them at regular ſtated hours; but to whatever cauſes the greater mortality amongſt the troops may be aſcribed, the difference was very great, as appeared by the returns made to Lord Cathcart, on the day of the embarkation at Portſmouth, compared with the returns given to General Wentworth, when the remains of that army were embarked at Jamaica, to return to England.

THERE may be other cauſes for the great difference between the numbers of ſeamen and ſoldiers, who die in the Weſt-Indies; but it is probable, that thoſe I have aſſigned, are ſome of the true and moſt capital, if it is conſidered that, when

ſhips

ſhips are careening, they are always moſt ſickly, and, at ſuch times, the nature of their duty is neareſt to that of the troops, and, like them, the ſailors have opportunities of ſtraggling about in the ſun, of ſleeping in the open air, and of getting great quantities of liquor.

When a ſhip, which has been but a little time in the country, happens to careen, the bilious fever always breaks out amongſt her crew with great ſeverity, and ſweeps away great numbers; and the leſs time ſuch ſhips have been in the country, the more men they loſe. For this reaſon, line of battle ſhips ſhould never be hoved down (that is careened) till they have been a year or more in the country, excepting in caſes of great neceſſity; and it would be well, if the ſmaller ſhips and ſloops were always cleared by other ſhips, or by a hulk; by which means their crews

would be kept from ſtraggling, drinking, and ſleeping in the open air in the night, and often in the ſun in the day-time, when they are drunk. By ſuch precautions, many melancholy conſequences to the men would be prevented.

It is well worth the attention of the admiralty, to ſend ſhips and troops from Great Britain, ſo as to arrive in the Weſt Indies when the rains, and great heats which follow them, have ceaſed. In the time of war, they muſt often be ſent, as they can be got ready, or as they are wanted; but if ſhips were ſent in times of peace in this manner, and to cruize eight or ten weeks afterwards, in or near the latitude of their ſtations, there is great probability that many lives might be ſaved, and this dangerous fever rendered leſs formidable.

Of

Of Remitting and Intermitting Fevers in the West Indies.

SHIPS are always ſickly when they are careening; not of the bilious fever, if they have been long in the country, but of the intermitting and remitting fevers, the endemics of the climate; by which, and their conſequences, many men are loſt; and therefore, I ſhall make a few obſervations on the method of treating them.

ALTHOUGH the bilious fever, we already treated of, admits of bleeding, in particular circumſtances only, and ſeldom of a repetition of that operation, theſe fevers do not only bear bleeding well, but when the paroxyſms run high, as they commonly do,

do, eſpecially in the intermittent, veneſection becomes abſolutely neceſſary. The fit in both begins with rigors, or chillineſs, ſucceeded with all the uſual ſymptoms of an ardent inflammatory fever; bilious vomitings are common, and a high delirium, for four or five hours, is a frequent ſymptom in the intermittent. In theſe circumſtances, bleeding is indicated, and the blood drawn is commonly ſizy, and has a buff-coloured pellicle on its ſurface, after ſtanding a couple of hours; when the paroxyſm is intenſe and long, it is likewiſe neceſſary to empty the inteſtines by a clyſter; to encourage drinking ſome acidulated attenuating beverage, and ſometimes to apply a bliſter between the ſhoulders. The intermiſſions which follow theſe intenſe paroxyſms, are, for the moſt part, clear and perfect, but often of ſhort duration, the fit being apt to return in five or

ſix

ſix hours; the ſucceeding fits are ſeldom ſo intenſe as the firſt, but they are often longer, very apt to degenerate into a continued fever, for three or four days, when the ſick come to be in a conſiderable degree of danger; hence it is always unſafe when the paroxyſm is violent, to delay giving the bark till a ſecond or third intermiſſion.

As ſoon as the delirium is gone off, a moiſture is uſually felt on the ſkin, though there may remain a conſiderable degree of heat, and a quickneſs in the pulſe: I then began to give the bark in ſubſtance, which I have always found to ſit remarkably well on the ſtomachs of the ſick, on the decline of all fevers incident to this climate, which, without the bark, would ſcarce be habitable by Europeans. If a patient does not take a ſufficient quantity, in an interval of five or ſix hours, to abate the ſtrength

of

of the ſucceeding fit, he is often in great danger. I uſually waſhed down the bark with a large draught of cold limonade, which being extremely agreeable and refreſhing to the ſick, contributed not a little to his retaining the bark on his ſtomach, and prevented his being ſick. I gave the bark alone, made up into an electuary with ſyrup; for it is of great conſequence to give a conſiderable quantity before the return of the next fit, and I was unwilling to load the ſtomach with any drug, but that which I judged indiſpenſably neceſſary for the ſafety of the ſick. Given in this manner, I ſeldom found it rejected; but if it happened that the firſt doſe was given too early, before the fever was ſufficiently abated, and it was thrown up, I made a ſecond attempt, in half an hour after, with better ſucceſs, and continued to give it at the rate of an ounce, ſometimes of

ten

ten drachms in an interval of ſix hours. This I have done times out of number, and have frequently taken as much myſelf.

When the fever is got the better of by the bark, it muſt be repeated in a few days; notwithſtanding which, the fever is very apt to return in four or five weeks, and therefore I have always found it the ſafeſt way, either to continue giving the bark twice or thrice a-day, for ſix weeks or two months, and ſometimes longer; or to give ſix drachms, or an ounce, at the end of every fortnight, or three weeks, from the firſt attack, for three or four months, giving a ſtomachic purge or two occaſionally.

I had a melancholy inſtance of the bad effects which often follow the neglect of giving the bark on the firſt intermiſſion of a fever, in the caſe of Commodore Dent, who, in the year 1737, after catching cold, was ſeized with

with a very ſevere fit of an intermittent: after it was over, I propoſed to give immediately the bark in the intermiſſion, which laſted ſix hours; but this being over-ruled, he was attacked with a ſecond fit, and no intermiſſion following, he died comatoſe in about twelve or thirteen hours.

From this, and many other ſuch like caſes, I was confirmed in the opinion, that the adminiſtering the bark, ought not to be delayed after an intermiſſion at the end of the firſt fit. I never ſaw abdominal obſtructions from the uſe of this drug, they generally proceeded from the frequent returns of the diſorder.

The ſymptoms of the remitting fevers, are never ſo violent as thoſe of the intermittent; but they continue longer, and the remiſſions are ſhorter than the intermiſſions of the other. A delirium here is not com-

mon, though the ſick are apt to forget themſelves, and to ramble a little when awake, till they are ſpoke to, when they preſently recollect themſelves: their ſleep is diſturbed and uneaſy; and they are apt to toſs and tumble, and talk in their ſleep. They ſeldom have the bilious vomitings, though they are ſick at ſtomach, and ſometimes bring up their food; the pulſe is quick, ſmall, and harder than in the bilious, or intermitting fever.

THIS remitting fever bears bleeding well, but in ſmaller quantities than in the intermitting; and it will better bear a repetition of the operation. After the firſt bleeding, I uſed to give twelve or fifteen grains of ipecacuanha, with two grains of tartar emetic in the evening, which commonly cauſed a ſtool or two. I ordered the patient to be put to bed ſoon after the operation of the vomit; and, if there was a tendency

to

to ſweat, I encouraged it, by giving ſix drachms, or an ounce of ſpiritus mindereri, and making the ſick drink vinegar whey, or ſage tea, after it. Sometimes it happened, when the ſweat was free, that a perfect intermiſſion, inſtead of a remiſſion, would enſue; but, if the latter only was the caſe, and the fever continued with ſhort and imperfect remiſſions, then, after bleeding twice or thrice in ſmall quantities, and giving the vomit, and a lenient purge, bliſters to the neck or arms, or to both, ſeldom failed to procure an intermiſſion; and ſometimes I ordered bliſters ſooner; whether the bark is to be given in the remiſſions of this fever, or whether in the firſt intermiſſion, or delayed till after the ſecond or third; and how often veneſection may be proper, and at what time bliſters ought to be applied, muſt entirely depend on the judgment of the practitioner.

THE ſymptoms of this fever are never ſo intenſe as in the firſt paroxyſm of the intermittent, which often reſembles the ardent ſtage of the true bilious fever. The danger is not ſo great, and the neceſſity of giving the bark is not ſo urgent, as it often is in the firſt intermiſſion of the other fever. But, at the proper time, the bark muſt be given freely in the remitting fever, and repeated occaſionally, as in the intermittent. In this fever, I uſed to add the radix ſerpentaria to the bark, and found the neutral ſalts to have their uſe.

BOTH theſe fevers are apt to return in ſpite of all that can be done to prevent them: the returns do not admit of bleeding like the firſt attacks, yet it is ſometimes neceſſary, and bliſtering is now more ſo; becauſe, on every freſh attack, the ſolids become more relaxed, and the circu-

lation more languid, and ſtand in more need of ſuch a ſtimulus.

In the intervals, between the returns, the cold bath will be found to be a good aſſiſtant to the bark, when there are no ſuſpicions of unſound viſcera to forbid its uſe. The food muſt be cordial and nutritive, always adding a few ſpoonfuls of Madeira wine to the liquid food, of which each ſeaman's allowance is a pint a day.

Both theſe fevers are extremely irregular, the remiſſions and intermiſſions returning ſometimes once, ſometimes twice a-day, at other times they take the form of tertians; but in general, the remittents had an exacerbation towards night.

When the fevers continue to return for any length of time, the habit becomes relaxed and debilitated; ſcirrhous livers, dropſies, jaundice, dyſentry, colliquative diarrhœas, hectic

hectic fevers, and conſumptions, are brought on, and the patients languiſh under one or more of theſe diſtempers till death puts an end to their ſufferings.

When, by the continuance of the intermitting and remitting fevers, there is reaſon to fear the acceſſion of any of the above complaints, the inhabitants uſually ſhift the place of their abode; the towns are drier than the country; and, in Jamaica, many come to Port Royal, which ſtands on a ſandy bay, at a diſtance from any woodlands, and is open to the wholeſome ſea breezes, and the inhabitants much leſs ſubject to intermitting and remitting fevers than thoſe of the other ſea ports; and while the hoſpital remained there, the ſick were ſeldom ſeized with complaints of this kind. Such great effect has a dry proper ſituation, not expoſed to land-winds.

When another hoſpital was built on the oppoſite ſide, though only at the diſtance of four miles, not one man in a hundred eſcaped theſe fevers who was ſent to the hoſpital, and remained three or four weeks in it; and even the marine guard, who were relieved once a fortnight, or three weeks, fared no better. This new hoſpital was built about a quarter of a mile from the ſea, on a dry pleaſant ſituation. The ground about was clear from woods; it roſe from the ſea by a gradual aſcent, and it was a commodious and ſpacious building; but, unfortunately, it ſtood full in the draught of the land-wind, at the diſtance of about two miles from a large extenſive marſh, on the banks of a freſh water river; on each ſide of theſe was a large tract of low, wet, ſwampy ground, covered with a long ruſhy kind of graſs, called Horſe-graſs, from its being the uſual food

of that animal. The moiſture ariſing from this ſtagnating water, and brought to the hoſpital by the land wind blowing full upon it, occaſioned ſuch a cold and chillineſs, that the ſick waked, and thought cold water had been thrown upon them; and often caught themſelves inſenſibly drawing the bed-cloaths over them, when this land-wind roſe in the morning; whereas in the forepart of the night, they lay without any covering at all, nor was any ſuch ſenſation, or cold felt while the hoſpital remained at Port Royal, where it was not expoſed to this land-wind. It was this damp wind, filled with putrid exhalations, which occaſioned the frequency of remitting and intermitting diſorders at this place. At my requeſt and repreſentations, this hoſpital was deſerted, though in all other reſpects it was good, and had coſt near fifty thouſand pounds. Ano-

ther was built at Port Royal, to which the ſick were ſent in the late war.

SEVERAL plantations, near to this new-deſerted hoſpital, are unhealthy from the ſame cauſe; though a village, a mile further up the country, and other places, out of the line of the draught from the marſhes, are healthy, and people ſoon recover when ſent to them, as myſelf and my family have experienced. So important is the choice of ſituation in this country.

WHEN the intermitting and remitting fevers continue obſtinate, or when the diſtempers which frequently follow them, are beginning to come on, or that there is room to think they are approaching, the natives and inhabitants often go to ſea in the king's ſhips for a cruiſe, and ſometimes to North America, and they frequently return quite recovered with

with regard to their appetite, fleſh, and ſtrength, both from that continent, and from cruiſing.

And when ſeamen were worn down by frequent returns of theſe fevers, or by the dry belly-ache, by which they often looſe the uſe of their limbs, nothing is ſo effectual a remedy as going to ſea; and I uſed to take every opportunity of ſending ſuch men out, as were likely to receive benefit either in their own, or in other ſhips. By theſe means, numbers of men were recovered, who would have been loſt by lingering in hoſpitals: if they happened to return without being cured, on application to the commander in chief, they were ſent to England by the firſt conveyance, whether that happened to be the king's, or a merchant ſhip.

Humanity cannot be better exerted, nor a more effectual ſervice

be rendered to the public, than by a careful attention to preſerve the lives of ſeamen, by diſcharging them from the Weſt India hoſpitals, whilſt they are likely to receive benefit, before the frequent returns of thoſe diſeaſes, that make their being ſent to ſea neceſſary, have ſo far reduced them, as to render their recovery doubtful.

Difficulties in doing this have ſometimes occurred; but nothing is eaſier than the eſtabliſhment of ſuch a regulation as ſhould conſtantly remove them; and it is obvious, of what importance ſuch a regulation would prove to every one who has ſerved any time in the Weſt Indies, and ſeen numbers of men ſent to ſea from the hoſpitals in a very declining way, who have returned afterwards healthy and well, after having been at ſea for ſome time.

VIII.

Account of the Treatment of Bilious Remitting Fevers, in the Military Hoſpitals at Martinico, *in the Year* 1761, *in a Letter from Dr.* George Monro, *M. D. to Dr.* Monro, Jermyn-ſtreet, London, 1765.

WHILE I remained with the military hoſpitals at Martinico, during the late war, a great number of the ſoldiers were taken ill of a bilious fever, that appeared to be ſomewhat of the bilious autumnal kind, but of a much more malignant nature than any to be met with in

in Europe: the bowels were commonly filled with a very putrid bile and other liquors; and the ſafety of the patient depended in a great meaſure on evacuating ſpeedily and ſafely theſe corrupted humours with which the primæ viæ were loaded.

Mr. William Ruſſel and I found the following to be the beſt method of treating it at Martinico:

If any of the ſoldiers came to the hoſpital on the firſt attack of the fever, taking away a ſmall quantity of blood was of ſervice; but, if the diſorder was advanced to the ſecond ſtage, bleeding was rather hurtful, except under particular circumſtances. It was ſeldom that the ſoldiers came to the hoſpital till the firſt ſymptoms were over.

When this fever was attended with a burning heat, a fullneſs and beating at the temples, and the eyes were turgid and full, as preſſed out of the

head,

head, attended with an intolerable ſickneſs, nauſea and pain of the ſtomach, and it gave the patient excruciating torture when the hand was preſſed on the ſtomach, the taking away ſeven or eight ounces of blood was of ſervice; after which it was neceſſary to keep, perpetually almoſt, fomenting the ſtomach, and to give frequent repeated emollient clyſters, till the body was opened; and then to give once, twice, or thrice, at the interval of ſome hours, a ſolution of one, two, or three grains of tartar emetic, and an ounce of manna in water, to puke the patient freely; and afterwards to give it in ſmall quantities, ſo as to keep the body looſe.

When the ſtomach was much oppreſſed, without any of the violent inflammatory ſymptoms before mentioned, then bleeding was omitted, but the fomentations were aſſiduouſly

ly applied to the ſtomach, and the body was opened by the help of clyſters; and then, three, four, or five grains of tartar emetic, diſſolved in a few ounces of any common julep, were given by way of an emetic, and repeated once, or oftener, if required. After it had operated freely, and the patient had diſcharged large quantities of bile, then ſmall doſes of a ſolution of an ounce or two of manna, and three, four, or five grains of tartar emetic were given, ſo as to operate freely by ſtool, at the ſame time that repeated emollient clyſters, the length of four or more in the day were adminiſtered. If the ſickneſs and nauſea continued, after ſome hours, the emetic was repeated once or oftener.

When the bowels were freely emptied, the fever either went off, or you had an intermiſſion; at which time it was neceſſary to give the bark

freely,

freely, the length of at leaſt an ounce in the twenty-four hours, which effectually put a ſtop to the fever. Small doſes of the bark had no effect; and if the bark was not given freely at this period, the fever was apt to aſſume again a dangerous form, and the patient to be loſt before another intermiſſion could be found for giving the bark.

THE bark was either adminiſtered in form of an electuary, made up with ſyrup of oranges, to which we added a ſmall quantity of the confectio cardiaca, or a few drops of oil of cinnamon; or of a decoction, to which was added ſome of its own extract to make it ſtronger.

I OBSERVED, with regard to vomits in this fever, that, if they were given before the fibres of the ſtomach were ſufficiently relaxed, by the continued uſe of fomentations for ſome hours, and if bleeding, where the ſymptoms re-

required it, was omitted, the vomits did hurt by ſtraining the patient too much, and increaſing the violence of the ſymptoms; but, after the precautions above mentioned had been uſed, the patients bore vomits eaſily, and they were the only remedies which ſeemed to have a proper effect.

The firſt vomit ſeldom diſcharged much bile, and the patients ſeemed more reſtleſs and uneaſy after it, by the bile being ſet in motion, but not evacuated; however, if the fomentations were continued for two hours longer, and a ſecond vomit was adminiſtered, then the ſick threw up large quantities of ſharp bilious matter, the length of a pint or more; frequently ſo acrid, as to erode the ſkin of the lips and cheeks round the mouth. After the vomit begun operating, draughts of about half a pint of cammomile-tea, or ſome other ſuch liquor, were given from time

time to time, which the ſick commonly threw up immediately; or if they did not, they were ordered to put a feather in the throat to excite a nauſea; and they continued the uſe of theſe drinks till they had diſcharged all the bile from their ſtomachs; after which the ſtomach was again fomented as before, and, after ſome hours, the vomit was often repeated a third time, when the patients, after diſcharging ſome bile, commonly threw up pieces of a kind of ſkin, of a brown chocolate, or coffee colour; and when this happened, they commonly got the better of the fever.

After the bowels were thoroughly emptied, and there was an intermiſſion of fever, if the ſtomach continued ſo irritable as to reject the bark, it was of uſe to give an opiate immediately, to procure reſt, and to make the ſtomach bear the bark, which

was ſo neceſſary for the recovery of the patient: ſmall doſes of opium had no effect, it was therefore neceſſary to give a large one, and ſometimes to repeat it before the end propoſed was anſwered; opiates when given before the ſtomach and bowels are thoroughly cleaned, always make the ſick reſtleſs and uneaſy, and are ſoon thrown up again; yet, after the bilious, and other corrupted humours have been diſcharged, they have a good effect in ſettling the ſtomach, and enabling it to bear the bark, which muſt be given in large quantities before the bile has time to be again accumulated in the ſtomach and bowels.

When the ſtomach bore the bark without the uſe of opiates, they were always omitted.

I obſerved, that this method of giving repeated vomits, generally proved ſucceſsful, where it was attempted

tempted early in the diſorder, before the blood was too much diſſolved by an abſorption of large quantities of bilious matter *.

* Some of the medical gentlemen, employed in the military hoſpitals at Martinico, in the year 1761, ſuſpected that many of the fevers which they treated there, were of the true yellow kind; but Drs. Hume, Mackittrick, and Dr. Pollard of Barbadoes, who all had practiſed long in the Weſt Indies, on hearing the method of cure uſed, ſeemed to think, that they were of the remitting and intermitting kind; and they obſerved, that ſtrong emetics given ſo freely in the yellow fever, would have been in danger of bringing on an inceſſant vomiting, which could not have been put a ſtop to; though they all ſaid, that they never had ſeen the precautions of fomenting the abdomen ſo freely as here deſcribed, and opening the belly, uſed previous to the adminiſtration of vomits.

IX.

Thoughts on the Hydrocephalus Internus, by Ambroſe Dawſon, *M. D. Fellow of the Royal College of Phyſicians*, London.

AFTER a fatal diſeaſe, which has been well deſcribed in ſome late ingenious eſſays, diſſection has diſcovered an extraordinary quantity of a pure, limpid fluid in the ventircles of the brain; hence it is termed Hydrocephalus Internus.

PURGATIVES and diuretics ſeem to have been univerſally preſcribed, and

and depended on, as the moſt rational method of combating this dropſy: but with what ſucceſs! I fear not one in an hundred has eſcaped; and ſurely the happy recovery of the few who may have eſcaped, has ſurpriſed and exceeded the expectations of the phyſicians, if not allowed, or ſuggeſted by them to have happened naturæ conſilio, potius quam arte medica.

If this be in a great meaſure true, it cannot be out of ſeaſon to diſſuade from perſevering in a practice, which experience does not juſtify nor approve.

Though much may be ſaid in favour of the above-mentioned method; yet it may be urged againſt it, that, as coſtiveneſs, and a difficulty of procuring ſtools are attendant on this diſeaſe, mercurial, antimonial, reſinous and ſaline purges, before they operate downwards, will irri-

tate the primæ viæ, and may find their way into and irritate the vaſcular ſyſtem, and alſo cauſe ſuch a diſſolution of the fluids as will increaſe the diſeaſe. That diuretics, which are more uncertain in their operation, will have the ſame effects; and that though purgatives and diuretics in ſome collections of fluids, and congeſtions may contribute to an abſorption, they can have little effect with reſpect to the removal of hydropic tumors in the ventricles of the brain; yet, by irritating the ſtomach and inteſtines, will excite ſpaſms, which may be communicated to the very ſeat of the diſeaſe, and rather prevent an abſorption, which is undoubtedly beſt promoted by removing the impediments to it.

But to have done at preſent with ſpeculations and conjectures.

Let

LET every one recollect the ſurpriſing powers which nature has manifeſted in the cure of diſeaſes, judged to be deſperate and incurable; let us reflect on the many eſcapes from acute and chronical diſeaſes, by criſis perfect or imperfect, effected by this ſagacious and able phyſician; and either commit the affair intirely to nature, or proceed upon ſome new plan; for certainly the preſent one has not received the ſeal of experience, as far as I have ſeen or read: mournful teſtimony I could bear to the contrary: and who can ſay that nature has not cured more of theſe hydrocephali than art? probably not the faculty, who *might* be the beſt judges in this matter; for where they have come, ſomething, I preſume, has always been done; and the teſtimony of others will have little weight, and leave the queſtion undecided: yet moſt

certainly it is an Herculean diſeaſe, and probably for the moſt part above the powers of unaſſiſted nature; and although, not having ſufficient authorities for it, it would be thought inexcuſable, if not next to impoſſible, to look on innocent victims, and do nothing, yet, in the event, it may poſſibly be worſe than doing nothing, to harraſs and interrupt nature with inadequate means, ineffectual attempts, contrary intentions, and oppoſite powers.

What other courſe then in preference to the plan of purgatives and diuretics, and a deſultory practice from beginning to end, can be recommended, by way of trial? I doubt neither reaſon nor experience can at preſent ſolve this queſtion. I will briefly relate ſome obſervations.

Miss C—. ætat. ſeven or eight, at the boarding-ſchool, fell and ſtruck her

her head againſt an iron rod, which was placed to keep the young ladies from the fire: about a fortnight after ſhe was brought to Conduit-ſtreet, complaining of a moſt acute pain in her head, with an almoſt inceſſant ſhrieking, and obſcure delirium: the caſe ſeeming very urgent: ſhe was blooded, cupped, and bliſtered, during my attendance, from which I withdrew the ſecond day; as, after an abſence of a few hours, I found a phyſician had been called to her, who, declaring it a worm-caſe, had preſcribed for her: it was treated as ſuch till about the thirteenth day, when the doctor directed the trepan; but the ſurgeons declined or deferred the operation, on account of her extreme weakneſs; and the next day ſhe died.

I VISITED two poor girls, ætat. twelve or thirteen, in caſes pretty ſimilar to Miſs C—'s; but not pre-

ceded by any violence; and, having directed V.S. hirud. temporib. veſicat. occipiti & brachiis, I depended chiefly on theriac. andromach. and, after ſhrieking a week or more, they both recovered.

HEWSTON, a poor girl, fifteen years of age, complained of a pain in her head: about the third day a kind of fatuity came on, with perpetual raving or ſhrieking: about this time I ſaw her: a bliſter, purging phyſic, &c. had been adminiſtered: her diſorder increaſed; and, in the courſe of her illneſs, both hands were frequently applied to the forehead; and, if not prevented, ſhe would have beat her head againſt the wainſcot: it was impoſſible to count the pulſe, as the leaſt touch threw her into violent emotions; urine and ſtools came away involuntarily, and ſhe loſt her ſpeech.

She was ſo very unmanageable, and ſuch a miſerable object, that it ſeemed loſt time to attempt a minute detail, or particular inveſtigation of the caſe; and I followed the moſt obvious indications.

As there ſeemed a diſtention and diſturbance in the lower belly, I ordered ſeveral water-gruel clyſters; and, for the exquiſite torture which it appeared ſhe ſuffered in her head, veſic. occipiti, and a mixture with confect. Damocrat. to be given freely; and afterwards with theriac. andromach. as containing more opium; and, on being informed that ſhe had been ſubject to ſore ears, veſic. pone utramque aurem, one to be renewed every day; and the violence of the diſeaſe not abating, I added tinct. thebaica. gutt. xv. three or four times a day, for ſeveral days. If at ſome times ſhe appeared better, ſhe ſoon was thought worſe again: however the

the bliſters made a good diſcharge: that to the occiput, through a miſtake, remained there eight or ten days, till a hole was worn through the leather; the opiate ſeemed to take more and more effect, and at length maturated puſtules were ſeen upon her arms and ſhoulders, &c. and about the hips there were large excoriations, and ſome deep ulcers: ſhe had reſt and ſleep; recovered her underſtanding and ſpeech; the urine could be ſaved, and was high coloured without ſediment; the pulſe could be counted, and was under one hundred and twenty; ſhe ſat up in a chair the twentieth day from the time ſhe began to rave or ſhriek, and, in a reaſonable time, was reſtored to ſound health.

It is ſcarce to be diſputed, but that, in the related caſes, the ſeat of the diſorder was in the head; yet to

ſay

ſay what particular part or parts were affected, and to aſſign the remote and ſubſequent cauſes, whether ſpaſm, ſtricture, obſtruction, acrimony, inflammation, extravaſation, compreſſion, tumor, and of what kind, &c. is a matter of the greateſt difficulty: and, indeed, in many maladies of the brain, I think it would not be modeſt to pretend, with preciſion, to point out, either from experience, or by argument, which are the particular part or parts affected, together with the progreſſion of cauſes, and their conſequences, from firſt to laſt.

Nor do I hold out theſe hiſtories as being certainly obſervations of the diſeaſe in queſtion; I know them to be very defective: had I read Doctor Whytt's candid and ingenious Treatiſe on the Hydrocephalus Internus, when theſe patients fell into my hands, my notes, I doubt not, would have

have been more full and ſatisfactory to myſelf, and, on being communicated, better received than in the preſent imperfect recital.

However, as far as I can collect from my own obſervations, both before, and ſince Dr. Whytt's and other ingenious pieces were given to the public, there is not yet diſcovered a good method of eluding the darts of this inſidious deſtroyer! How many phyſicians have mourned and deſponded in the courſe of their moſt aſſiduous care and active endeavours! nevertheleſs as this diſeaſe has now obtained a good deſcription, and a name, and one manifeſt cauſe is pointed out, it would be puſilanimous to deem it inſurmountable, or next to inſurmountable: nature, eaſed or aſſiſted, has effected wonderful cures; and though it may not yet be known from what quarter this relief is to come, yet repeated obſervations,

ſervations, reaſon, ſagacity, or accident, may bring about the happy diſcovery.

If a large collection was made of rough journals, or corrected hiſtories reſpecting this caſe (which would be no difficult taſk), experienced phyſicians would probably ſooner agree concerning remote and other cauſes; and, which is more to the purpoſe, aſcertain and fix upon ſuch pathognomonic ſymptoms, as would be allowed ſufficient to prove, or juſtify the opinion of the preſence of the diſeaſe in queſtion, in its firſt ſtage. To know it in its earlieſt period, I conceive will be found of the utmoſt conſequence in practice.

In a fatal caſe, which I have not the leaſt doubt was the hydrocephalus internus, I directed a ſeton in the neck; but my advice was not followed: in another ſuch caſe I repeated this advice, and ordered

flor. cardamin. every four hours; this preſcription was complied with on the third or fourth day after the diſeaſe was completely formed, as it was pronounced to be from the following ſymptoms: very great pain in the head and vomiting, ſome heat, with a ſlow, then variable pulſe, dilated pupils, alternate ſtupor and complaint, compoſure and delirium, coſtiveneſs and convulſion-fits. I mention this caſe in part to obſerve, that, after this preſcription, there was no return of the convulſion fits, though the boy lived full fourteen days longer: he died about the twenty-fifth day from the time his indiſpoſition was firſt noticed.

On opening the head, the veins of the pia mater appeared greatly diſtended; about five large ſpoonfuls of a clear water guſhed from the lateral ventricles of the brain: I catched near four, the reſt eſcaped:

this

this boy was tender and ſickly, and about ſeven years and an half old.

Before I viſited him, leeches had been applied to his temples, and a veſicat. inter ſcapulas: he had taken tartar emetic and manna, and ſaline draughts. Afterwards he had a bliſter to the whole head; and, a few days before his death, acrid cataplaſms to the feet. As the length of the caſe afforded an opportunity, he had a variety of purging medicines and clyſters, took neutral and volatile ſalts, camphire, ſaffron, ſoot drops, &c. and a little tinct. thebaica, which commonly contributed to relieve the pain and reſtleſsneſs: ſome pimples appeared about the noſe, and the cuticle was raiſed as after cryſtals. I fear too much was done. There were many turns and changes, ſeemingly for better and worſe, in the courſe of the diſeaſe.

At ſome times he was calm and ſenſible; at other times he cried out, "What ſhall I do with my head? Rock my head, oh mother! oh mother!" and bawled or ſhrieked to be heard in the ſtreet.

If phyſicians would give the ſymptoms of the hydrocephalus internus from their own obſervations, (as little as may be from the relation from others)

I. In caſes where diſſection has demonſtrably proved the nature of the diſeaſe;

II. In fatal caſes, in which a concurrence of what are eſteemed leading ſymptoms may have ſeemed ſufficiently to have marked the diſeaſe, but where an examination was not permitted;

III. In caſes which have had a happy event, and in which all or moſt of theſe ſymptoms had been remarked;

IV. In

IV. In cafes of a favorable termination, where only ſome of the moſt notable ſymptoms ſeemed to fix not an ill-grounded ſuſpicion of this diſeaſe;

And if at length a compilation of ſuch hiſtories was put into the hands of phyſicians, together with the full detail of the method and means of cure, ſurely this would contribute not only to obtain an early diſcovery of the caſe, but alſo to form and eſtabliſh a better plan of practice, in a direful diſeaſe, which hitherto has proved fatal to many innocent and promiſing ſubjects.

But to come to the point: if recourſe has generally been had to purgatives and diuretics, together with a variety of other medicines, and the event has hitherto been almoſt univerſally unſucceſsful; if reaſon and experience have hitherto

proved insufficient guides, what remains but to make new attempts for better success?

Please candidly to accept the following outline of another plan for trial:

Refrain intirely from the use of active, irritating, and chilling purgatives and diuretics, the warm stimulating nervous medicines, acrid cataplasms, and from whatsoever may disturb, harrass, and reduce the strength of the patient; and, after perhaps drawing a little blood, and giving a laxative oily clyster, cover the whole head with a blister, apply blisters behind the ears, and keep them all open (I now rather object to a seton); give large and frequent doses of theriac. andromach. or tinct. thebaic. or a solution of opium in an aqueous menstruum, or of syrup e Meconio; principiis obsta may be found as applicable to this,

as to any caſe whatever; between whiles give large doſes of flor. cardamin. and, as abſorption may be neceſſary to the cure, it may be proper to caution againſt a free uſe of diluting liquors.

GIVE me leave to obſerve how little conſiſtency ſoever there may ſeem on the whole:

That in ſome diſeaſes a certain degree of fever is a *ſine quâ non* to the cure;

That, though cantharides impreſs a painful ſenſation on the ſkin, and urinary paſſages, nevertheleſs the extraordinary relief they diſplay in ſome diſeaſes, may be owing, for aught we can tell, to a kind of titillation, or ſome unknown operation on inviſible fibrillæ, unexplored canals, and on fluids not yet dignified with a name: who can aſcertain or limit the variety or extent of their powers?

That I have ſeen cures ſucceed the exhibition of flor. cardamin. in ſpaſmodic caſes and watchfulneſs, and judge it to be of a demulcent ſedative quality;

That a free exhibition of opium in painful ſpaſms, ſtrictures and obſtructions, in ſhort, in many maladies, has afforded ſurpriſing relief, and ſometimes even in the aſcites; if ſo, in this excruciating complaint, of which a method of cure is not yet diſcovered, why ſhould it not be tried to the very uttermoſt? Untrodden paths are to be preferred to the broad way which ends in the grave.

Who can be certain that an unuſual quantity of a fluid in the ventricles of the brain is the principal agent in this tragedy? Ought not this dropſy rather to be conſidered merely as the effect of a ſpaſm, ſtricture, obſtruction, &c. which

ſtill

ſtill continues in full force? (will not a ligature on a vein cauſe an oozing of lymph? and have not preternatural tumors been found in the brain, which have neither been preceded nor accompanied by ſuch ſevere torments as are expreſſed in this diſeaſe?) probably in their increaſe they may act as conjunct cauſes in producing the medley train of ſymptoms.

This is a pitiable caſe, in which the moſt tender feelings, the ſoundeſt judgement, and the utmoſt ſagacity of the phyſician will find a call, and a taſk ſufficient to exerciſe and diſplay themſelves: but, alas! I fear the phyſician is ſeldom ſent for till the opportunity may be loſt.

To add more is unneceſſary to determine the experienced and judicious phyſician to adopt or reject this plan: may it ſolicit the faculty

to project a better: if any phyſician inclines to try it, he will judge of the expediency of drawing blood, the quantity, from what part, and which way; whether by leeches from the temples, with the lancet from the jugular vein, or the ſcarificator from the neck or occiput (I do not recollect the ſtrangury to have been troubleſome in this caſe); he will judge how his patient will be able to bear the opening ſo many exterior ſluices at once (the only proper time being the earlieſt period of the diſeaſe); he will uſe that opiate his judgement prefers, and perhaps, after directing one clyſter, think it proper to leave the ſubſequent evacuation by ſtool to the conduct of nature, as being conſonant to this plan: yet he may ſee cauſe to direct ſeveral laxative clyſters (after the manner of Sydenham in the comatous fever of 1673) in its

its firſt ſtage, or to try, in its progreſs, the natural diuretic balſams with opium, or even to apply an opiate to the head: and he may, in time, diſcover by what criſis, if any, nature attempts the ſolution of this diſeaſe: he may retouch and improve this outline, and, by degrees, render this plan really profitable; or in the attempt be happy to catch, complete and communicate a new and the moſt finiſhed one this difficult argument will admit of.

It is to be hoped that a premature hardneſs and compactneſs of the bones of the cranium do not lay ſuch a foundation of this diſeaſe, as that it may proceed in a ſlow and gradual manner, and alſo may make a more precipitate appearance, in conſequence of an injury done to the head, by a blow or ſhock, great activity, or exertion of bodily ſtrength.

I beg leave to ſubjoin the following peracute caſe, as, from the ſymptoms, it ſeems to have an affinity with the foregoing ſubject, and eſpecially if we ſuppoſe it to have ariſen from a gradual extillation of blood or lymph.

JUNE the 17th, 1755, between ſeven and eight in the evening, a young lady of quality, ſix years of age, ſtood on a low ſtool, and, falling backwards, pitched upon the occiput; ſhe ſeemed not much affected by the accident; walked, and was tolerably cheerful; deſired to lie down, and ſlept upon the bed three quarters of an hour: when taken up ſhe vomited, and her head was preſently drawn backwards, and, towards the right ſide, ſhe had a fixed ſtare; the pupils of both eyes were greatly dilated, and ſhe became ſpeechleſs and ſenſeleſs.

ABOUT

About ſeven ounces of blood were taken from the arm; and, ſoon after, near as much from the neck. The vomiting continued. A few drops of ſp. corn. Cerv. and tinct. fulig. were given out of a tea-ſpoon; ſometimes they went down, and ſometimes they dribbled out of her mouth; her teeth at times were fixed cloſe together; convulſions ſoon came on, affecting more particularly the left ſide of the face, and the left arm; the convulſions often ceaſed a little while, and returned again; her throat ſwelled; reſpiration was unequal, with a froth upon her lips.

The occiput was ſhaved, and a redneſs manifeſtly appeared a little to the right, with ſcarce any ſwelling: univerſal convulſions attacked her, and, ceaſing, the body was ſtretched at full length, the eyelids dropped ſo as to cover more than half

half the eyes; ſhe was motionleſs, and repreſenting the image of death: the ſudden loſs of ſo fine a young lady was lamented by moſt of the attendants, and I could perceive only a ſubſultus in the wriſt inſtead of a pulſe which had before been tolerable.

However, ſigns of life ſoon appeared to all: ſhe was convulſed again in a leſs degree; and, in a ſhort time, had the reſemblance of one in a quiet ſleep. To omit nothing that might be thought expedient in ſuch caſes, and to avoid cenſure, this opportunity was ſeized to make a crucial inciſion, which had been propoſed, but deferred on account of the convulſions, &c. During the operation ſhe only moved one foot once; no fracture, fiſſure, nor depreſſion could be diſcovered: a little blood flowed.

She was put to bed again, lay compoſed, with an eaſy reſpiration, and a good pulſe: a purging clyſter was given, which operated in the night: ſhe ſlept well, awaked and drank barley-water; ſlept and awaked again; knew thoſe about her; called for barley-water; and, the next morning, had no complaint, except the ſoreneſs occaſioned by the inciſion, which was made about three hours after the accident happened.

With thoſe who chooſe to judge that here was only a concuſſion of the brain, I would not contend, only hope they will allow that nature was the beſt phyſician; and that though the evacuations might be aſſiſtant to nature in this very acute caſe, and almoſt total inſenſibility, yet that repeated evacuations may not be equally ſo, in caſes with ſomewhat ſimilar ſymptoms, but of a far leſs acute kind.

Per-

PERMIT me to add to this peracute affection of the brain, in as concise a manner as may be, the history of a disease of a very chronical kind, though in a different part of the body, in which the powers of nature happily prevailed.

A lady of a thin habit, about the forty-second year of her age, in the year 1749, miscarried, and, soon after perceived a small hard internal tumor above the os pubis, on the right side. In autumn 1752 she had a severe fit of the cholic, attended with a swelling at the pit of the stomach, which did not totally vanish; and another tumor could be felt on the inside of the right ilium, which by degrees extended to the navel, and gave a manifest increase and fulness to that side. She seldom suffered by a suppression, but often under an immoderate flow of the catamenia.

TOWARDS

TOWARDS the end of the year 1753, ſhe conſulted a very eminent phyſician in the north, and was ſuddenly attacked with a dropſical ſwelling of the legs, thighs and belly; more particularly towards the ſtomach; and to ſuch a degree that ſhe could not lie down in bed: gentle purges and ſquills gave ſome relief.

SHE left the country with the fluxus menſium upon her; and, in that condition, May the 12th, 1754, arrived in London.

ON an attentive examination by her phyſicians and an experienced ſurgeon, the whole abdomen appeared greatly ſwelled; the right-ſide, in which we perceived a large hard tumor, was more prominent than the left, and a double kind of fluctuation was obſerved, I mean not only above and below the hard body,

body, but alſo as if a fluid was contained in a cyſt, a cyſt probably ſpringing from, and pendent on, the ovarium, or formed in the Fallopian tube: ſuch at leaſt were our conceptions of the diſeaſe, that the prognoſtic made was, no cure; and conſequently only palliatives preſcribed: ſhe afterwards complained more than once of a good deal of pain and ſoreneſs about the large hard tumor.

The lady had loſt fleſh, but had a quiet pulſe, clean tongue, no thirſt, a tolerable appetite, good ſpirits, was ſeldom feveriſh, and remarkably temperate in the uſe of liquids.

Medicines were laid aſide in July; and, not being worſe, in Auguſt ſhe travelled to her houſe in the north; where the ſwelling of the abdomen increaſed, eſpecially about the epigaſtrium,

gaſtrium, and ſhe took purging medicines without benefit.

In October ſhe ſet out from the north, and, on the road, had a return of the flux. menſ. immodic. attended with great pain, on which ſhe began the uſe of Turlington's Balſam, taking gutt. xxx at night, and gutt. xx in the morning in half a glaſs of mountain wine. The 7th ſhe arrived in London, ſaid her ſtomach was now very hard, and that the left ſide equalled the right in ſize, though the ſwelling on the whole was ſomewhat leſs than at the beginning of this journey: ſhe perſiſted in the uſe of the balſam; the catamenia ſoon ceaſed; urine increaſed a little, and the ſwelling rather decreaſed; but theſe advantages were ſo trifling that ſhe thought fit to take the balſam only now and then.

She returned into the country; and took a journey to London the following years:

In 1756 she seemed in perfect health; the abdominal swellings excepted: and these continuing, in 1760, I directed one ounce of guaiacum chips, six drachms of senna, and two ounces of juniper-berries to be boiled in a quart of water to a pint, of which she took three or four ounces once a day, so as to have one or two motions.

In the summer of 1761, having then taken this decoction about twelve months, it was observed that her body was certainly diminished; and, in 1762, she told me she was perfectly well, and had no remains of her complaints whatever, except a small, hard swelling of the right side, which gave her no trouble; and she suffered no more

from

from theſe diſorders ; but improved in fleſh and ſtrength, and had a healthy countenance.

AFTERWARDS ſhe had ſeveral attacks of the gout, on which account ſhe repaired to Bath for ſome winters ; had a paralytic ſtroke in the abbey-church ; and, after a few days, died on the firſt of January 1771, full twenty years after the miſcarriage.

WHAT would draſtic purges and powerful diuretics have done in this dropſy ? moſt probably have hurried her to the grave : and, though the balſam, which is ſuppoſed to be a ſolution of the warm natural balſams and opium, may be allowed to compoſe and comfort, and though the decoction may be allowed to remove ſome impediments to reſolution and abſorption, yet, I preſume, they will not, either ſeparately or conjointly, be judged equal to ſo complicated and deep-rooted

a malady ; and that the unexpected termination of it ought to be aſcribed chiefly, if not ſolely, to the ſecret efforts, and wonderful operations of nature.

X.

X.

Obſervations on Hydatides in the Heads of Black Cattle and Sheep, in a Letter to Dr. Monro, Jermyn-ſtreet. *By the ſame.*

Dear Sir,

I Have made a diligent inquiry into a diſeaſe common amongſt ſheep in theſe parts, and ſometimes ſeen in black cattle. This diſeaſe is taken notice of in a note on the Internal Hydrocephalus, in your uſeful Eſſay on the Dropſy; and,

though you ſeem to doubt the truth of the hiſtories quoted there (indeed ſtrange things, related by ſtrangers, do not readily gain intire credit), yet I dare ſay, you will be pleaſed to have a confirmation of the facts from one who hopes he is no ſtranger to you; to which purpoſe I have collected, from plain intelligent countrymen, I believe, ſufficient evidence.

If this inquiry meets with your approbation, pleaſe to tranſmit it to the public in conſort with the other medical papers.

I am,

Dear Sir,

Ever your's affectionately,

Lancliff-Hall,
Craven, Yorkſhire,
Sept. 23, 1777.

Ambrose Dawson.

A kind

A kind of vertigo is ſeen amongſt ſheep and black cattle, and is here called the Sturdy or Turn in the Head, and ſaid to be occaſioned by a bag of water within the ſkull.

The ſheep turn about to the right or left, *i. e.* to the ſide the bag poſſeſſes: when the diſtemper is far advanced, they often fall down, and ſometimes lie on the ground a day or two, as if unable to riſe any more, and get up again and eat.

Sheep of one or two years old are moſt liable to this diſeaſe; yet, I am told, that it has appeared in the fourth year; and that one of this age recovered, after an operation, and brought forth two lambs the following ſpring.

On a careful examination of the head, after the diſeaſe has continued from ſix weeks to two or three months, a ſoft place is commonly found in the ſkull, perhaps of the

dimenſion of a ſhilling, and almoſt always on the back, near one of the horns: this ſoft part is pierced with an awl, or ſome ſuch inſtrument, moſt commonly, though not always heated; the ſheep is then thrown upon its back, and, by ſtopping its breath, and making it ſtruggle, a quantity of water is forced through the orifice, and ſometimes alſo a ſkin or bladder: the ſheep is inſtantly relieved by the diſcharge of the water; and, if the bladder be intirely taken away, perhaps cured by one operation.

In caſe a relapſe happens after a few weeks, either water is found to be collected in the ſame place, or another ſoft part may be diſcovered, and is opened as before. This operation has been performed in two or three places, and the ſheep have recovered; though the operation often fails, perhaps more than half are cured,

cured, though clumſily treated: few or none without an operation, except by ſome accident. A ſheep has accidentally knocked off its horn, and a horn has been purpoſely ſtruck off, when the ſoft part was under or cloſe to it, and the ſheep has done well.

THE bag may contain three or four ſpoonfuls or more of a fluid, and is ſaid to ariſe from the ſkull; and ſometimes two or three bags or hydatides are united together, and run from the back part forwards along the ſide of the head.

THE very latter end of November, 1776, a ſheep was attacked with this diſeaſe, and, during its progreſs, I ſaw the ſheep ſeveral times; when driven, it turned to the left, and ſometimes fell down; became very dull; gradually loſt its fleſh and ſtrength, and, in a little more than four months, died: the head had

been attentively examined from time to time, but no yielding ſpot could be found.

I ASSISTED a ſurgeon in removing the ſkin of the head, but could not perceive any external appearance of the diſeaſe; then the right horn, with a little of the cranium, was ſawed off; and was, as expected, in a natural ſtate, as was alſo what we ſaw of the brain: in removing the left horn in like manner, under which we concluded the cauſe of the diſeaſe would be found, a fluid guſhed out, which we were prepared to catch; and we drew out of the ſkull an exceeding fine membranous bag, without force, which, being diſtended by a ſpoonful of the fluid remaining in its bottom, meaſured about three inches; the whole of the fluid was about five ſpoonfuls, and did not diſcover any viſcidity by evaporation.

THE

THE bag poſſeſſed about a quarter of the cavity of the cranium, the brain being there obliterated; the internal ſurface of the cranium was not decayed; but the fore part of the brain, on which the bag reſted, was duſky-coloured, crumbly, and unſound. This membranous bag was ſo fine, that objects could be ſeen through it; and to its inſide adhered ſeveral clumps of the ſize of a ſixpence or a ſhilling, formed of ſmall granules, reſembling ſeed-pearl, only whiter: when dried, they were quite hard.

A FEW days before the ſheep died, and when it had not ſtrength to ſtand, ſome blows were ſtruck upon the left horn; but it did not ſeem to yield: perhaps, if a trepan had been applied earlier, near the horn, the bag might have been extracted, and the ſheep preſerved. I think an attempt of this kind adviſeable, if no ſoft

place

place can be diſcovered after the diſeaſe has continued two or three months.

A FARMER informs me, that he had a heifer, and a neighbour another, taken with the ſturdy; and that, after about ſix weeks, a butcher performed, on the ſame day, the following operation on both: Having, by preſſure with his thumb, found where the bone yielded, he raiſed up the ſkin, and took out a piece of bone, perhaps above an inch ſquare, and, with ſomething like a ſkewer, drew out a bag of water; put the bone in its place again, covered it with the ſkin, and rubbed perhaps a little butter and ſalt on the wound, and both the beaſts recovered. He ſays, there was no hole through the bone; it was only rendered thin and yielding; and that the butcher, who operated on theſe two beaſts, has frequently purchaſed others, when thus diſeaſed, at a low

a low price, and attempted their cure in the ſame manner: when they recovered, he had a good bargain: if the recovery ſeemed very doubtful, he killed and ſold them.

Black cattle are, alſo, at times, perceived on a ſudden to be in a very critical ſituation: when driven in ſummer, they are apt to lick up the duſt, and with it ſometimes a red inſect, of the ſize and ſhape of a ſheep's tick, and ſwallow it: it is called here, a Twig or a Soldier, and is ſuppoſed, by its poiſonous nature, to bring on an immediate and moſt dangerous diſtention of the belly: the cattle are often cured by inſtantly giving vent to the wind; this is done by thruſting the point of a penknife, or blade of a pair of ſciſſars, under the left loin, into the upper part of the firſt ſtomach (or great belly), which reaches thither: this

this is a well-known practice, and commonly ſucceſsful.

A BUTCHER told me he had, in this manner, cured his own beaſt; and that he had killed others, after being fatted, which had undergone this operation.

BUT other cauſes may give riſe to this diſtention: one of my cows was ſwelled in this manner, the third day after calving; and, to prevent preſent ſuffocation, the ſame butcher thruſt a knife into the firſt ſtomach (as appeared afterwards); great quantities of wind ruſhed out ſeveral times, and the cow ſeemed relieved, but died the ſame day; and, on examination, we found a mortification of the roſes in the bed of the calf.

To diſcover ſomewhat ſimilar circumſtances to ſome of the above, and attempt ſomewhat ſimilar operations in the human ſpecies, I leave to the obſervation and judgment of others.

XI.

XI.

Further Obſervations on Hydatides in the Heads of Black Cattle and Sheep. By the late Dr. Dodſwell, *Phyſician, at* Glouceſter.

THE late Dr. Dodſwell, who was phyſician to the Infirmary at Glouceſter, in a letter written in the year 1766 to a friend, which he deſired to be ſent to Dr. Monro, gave the following account of the method of extracting Hydatides from the heads of cattle, as now practiſed in the county of Glouceſter.

THE

THE operation performed by our cow-letches, and other doctors and ſurgeons of the brute creation (by what denomination ſoever they may go), is no other than a rough method of performing the trepan. For the large ſort of cattle, cows and bulls, the operator cuts three ſides of a long ſquare piece of the ſcalp, about the part aimed at when they knock the beaſt down for ſlaughter; then turns the piece ſo cut back, and ſcrapes off the perioſteum; and, with a hammer and a ſtrong ſhort knife, takes out a piece of the cranium, and perforates the dura mater. The cyſt then offers itſelf to view by the outward preſſure being removed, and the brain acting from under. He next turns the head of the beaſt downwards, that the cyſt, by its own weight, and the action of the brain, may advance in its paſſage through

the cranium. It generally breaks and lets out the water, and the operator then takes hold of it with his fingers, and entirely removes it: he then covers the wound with the flap of the ſcalp he had before laid back on the head, puts ſome warm pitch upon it, and over that a layer of cloths and ſome pitch on them. This operation is, in the ſame manner, performed on ſheep, for a diſeaſe called the Turn-gid, otherwiſe the Staggers.

Mr. Cheſter ſaw it performed on a bull who had fits, and who had had one juſt before the operation was performed: the operator aſcribed the diſorder to exceſſive venery; the weather being then very hot, and his concubines many.

The ſeat of the diſeaſe admits eaſily of the operation, it being between the dura and pia mater. And the practice of Glouceſterſhire, and I

ſup-

ſuppoſe of other countries *, gives Dr. Wepſer a degree of credit in his account of the ſame diſorder and operation.

If the Hydatides are in the ventricles, or lie deep in the brain, the ſuction uſed in Switzerland may be neceſſary, but then the operation is leſs likely to ſucceed.

It is obvious, from the uncertainty of the exiſtence of the diſeaſe, and the danger of the operation, why no attempt of this kind has hitherto been made on the human brain.

* Dr. Savary, king's phyſician at Breſt, who, in the year 1760, tranſlated Dr. D. Monro's Eſſay on the Dropſy, into the French language, in a letter to the author, wrote in the year 1765, ſays, That this diſeaſe is frequent among the cattle in the province of Britany; and, that the peaſants ſtill perform an operation ſomewhat ſimilar to that mentioned by Dr. Wepſer.

FINIS.

Fr. Bes